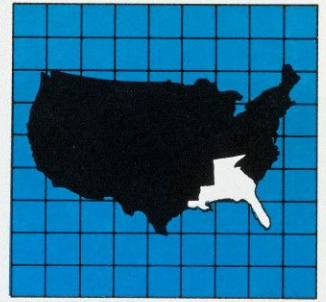


# Economic Review



FEDERAL RESERVE BANK OF ATLANTA

OCTOBER 1984

HEALTH CARE Slowdown in Growth

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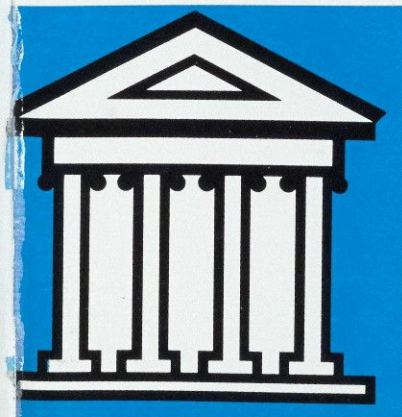
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S & Ls Hesitant Banking Competitors?

FEDERAL RESERVE BANK OF PHILADELPHIA

CREDIT UNIONS Seeking a New Role

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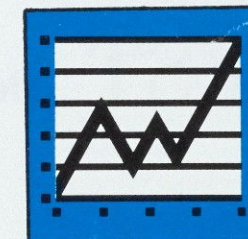
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industries more than doubled in the region and grew 80 percent nationwide. Hospitals and medical and dental labs multiplied almost twice as quickly in the Southeast as in the nation.

Despite this rapid growth the industry still commands a smaller portion of the labor force in the Southeast than its 7.4 percent share nationwide. Southeasterners spend less per capita for health care, but some of this cost differential is probably due to the region's lower cost of living. The per capita availability of health professionals, such as dentists, doctors, and nurses, is lower in the Southeast, and its other health resources, such as nursing homes, have approached but not yet reached national standards of availability.<sup>1</sup>

This disparity is surprising since the region's share of elderly residents is higher than the nation's and the difference in this share is expected to increase. Despite generally lagging health-care resources, the Southeast has proportionately more hospital facilities.

The health-care industry's growth during the 1970s and early 1980s entailed spiraling medical cost increases, but several changes are taking place that augur better cost control. Most of these changes will heighten consumers' and suppliers' sensitivity to price increases. For instance, higher deductibles and copayments for many medical services should help dampen demand. Enroll-

## Dynamics of Growth and Change in the Health-Care Industry

**Bobbie H. McCrackin**

The aging population, availability of funds for training and capital expansion, and the prevalence of health insurance have stimulated health-care industry growth in recent decades. But recent cost-cutting changes point to slower expansion in the future.

Health care has been an important growth industry in recent decades, particularly in the Southeast. The region's job ex-

pansion in medical care has outpaced that of most other local industries as well as the national rate of health care employment growth. From 1971 to 1981 jobs in health-related

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ment in health maintenance organizations, which has expanded more rapidly in the Southeast than in the nation over the last decade, should enhance member doctors' and patients' price consciousness since patients prepay fees annually rather than on a fee-for-service basis. Likewise, the institution of Medicare reimbursement according to illness or injury rather than cost of treatment should foster price consciousness among hospital administrators. The growth of the for-profit sector, particularly in hospital administration, should increase competition and lower prices in this industry segment, the largest source of health-care jobs and inflation. The proliferation of for-profit health-care establishments is significant for the Southeast, where one-fifth of all hospital beds are in investor-owned hospitals, compared with less than one-tenth nationally. A fast-growing population and more flexible regulatory climate for health care have swelled the industry's for-profit segment in the Southeast relative to other regions.

If successful, these developments portend more efficient allocation of resources and higher productivity but also slower job growth and possibly a less equitable geographic distribution of health manpower and services. Hospitals in the Southeast may be affected since the region has more beds per capita and lower occupancy rates than in the nation. However, the for-profit sector's strong base and rising demand, attributable both to migration and to the region's disproportionate share of elderly, should mitigate the effects of these changes on health-care jobs in the Southeast.

## Purpose of Study

In an effort to understand future economic trends in the Southeast, the Federal Reserve Bank of Atlanta has conducted ongoing research into growth industries with a significant base in this region. The service sector has been an important source of employment growth and stability in many parts of the Sixth Federal Reserve District during the past decade and is likely to continue to grow. The health-care industry is an important component of the service sector. Its size, measured in jobs or share of Gross National Product, rivals that of many basic industries in the manufacturing sector.

The medical-care industry exemplifies the strengths of the service sector, particularly in terms of job creation and resistance to cyclical fluctuations. It also reflects a chief weakness of service-based employment, namely, relatively poor productivity and lower wages. Despite the lower level of wages, health-care costs have been rising rapidly. Chiefly because of these cost increases, changes are taking place in the industry that may presage different patterns of future growth. While regulation to control costs is increasing, the health-care industry appears to be experiencing a revival of competition much like that occurring in the transportation and financial services industries.

The purpose of this article is to identify the dynamics of recent growth in the health-care industry in order to evaluate the impact of current changes and future trends. The first section describes the increasing share of resources, especially labor, allocated in recent decades to the industry in the Southeast and the nation. The underlying causes of these trends are examined next by comparing the industry's functioning with the market norm of economic theory. Finally, the outlook for the health-care industry, particularly in the Southeast, is evaluated.

## Health-Care Industry Growth

**Growth Rate.** From 1971 to 1981 the number of health-care jobs in the nation rose 80 percent, more than double the rise in nonfarm employment. Of the 10 types of health-care establishments, chiropractors' offices, a minor area, grew fastest over the decade (see Table 1). Allied health services (optometrists, health practitioners, outpatient services, and related establishments) increased at the second fastest rate.<sup>2</sup>

The growth rate was more rapid in the Southeast (see Chart 1). Medical-care jobs grew by 124 percent over the decade. In the Southeast, allied health services grew at the fastest pace, surpassing chiropractors' offices. Regional growth in hospitals as well as medical and dental labs surpassed the national rate.

**Volume Gains.** From 1971 to 1981 the health-care industry added 2.5 million jobs to the national economy. Almost 90 percent of the new health jobs were provided by hospitals, nursing care facilities, allied health services, and physicians' offices. Hospitals accounted for the largest share of that gain, while nursing-care facilities produced the second largest volume increase.

**Table 1. Health-Care Employment, United States and Southeast, 1971 and 1981**

	United States				Southeast			
	New Jobs 1971-81	Percent Increase	Percent Share		New Jobs 1971-81	Percent Increase	Percent Share	
			1971	1981			1971	1981
Total Health	2,468,629	80.4	100.0	100.0	330,440	124.2	100.0	100.0
Physician Offices	383,161	96.1	13.0	14.1	59,054	114.7	19.4	18.5
Dental Offices	197,539	114.8	5.6	6.7	23,737	131.8	6.8	7.0
Osteopath Offices	12,048	93.1	0.4	0.5	1,011	105.3	0.4	0.3
Chiropractor Offices	18,407	257.3	0.2	0.5	2,176	275.1	0.3	0.5
Hospitals	979,823	53.7	59.5	50.7	145,607	108.4	50.5	46.9
Medical & Dental Labs	45,748	81.0	1.8	1.9	7,277	143.6	1.9	2.1
Allied Health Services	265,219	210.0	4.1	7.1	33,629	296.4	4.3	7.5
Nursing-Care Facilities	563,281	119.9	15.3	18.7	57,052	130.0	16.5	16.9
Drugs	45,001	35.7	0.2	0.2	6,351 <sup>a</sup>	96.7	0.1	0.1
Supplies & Instruments	61,241	78.8	0.1	0.2	4,604 <sup>a</sup>	73.0	0.1	0.1

<sup>a</sup>Alabama and Mississippi are not included because data are unavailable for 1971.

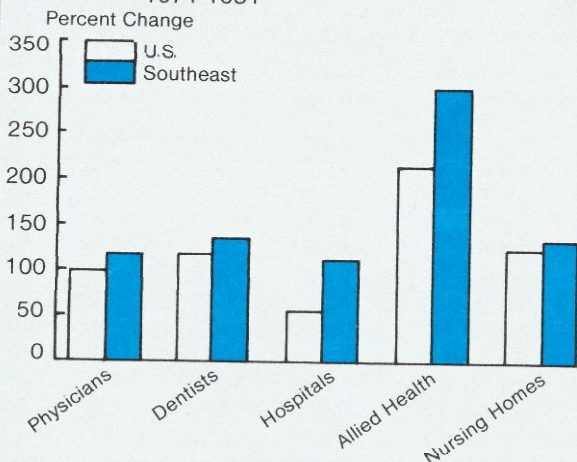
Source: Calculated by Federal Reserve Bank of Atlanta from data in U.S. Department of Commerce, Bureau of the Census, *County Business Patterns*, Southeastern States and U.S. 1971 and 1981.

Much of the growth in the physicians' category comes from doctors' increased tendency to incorporate; previously, most doctors were self-employed and categorized separately. The growth in hospital and nursing home employment has been fueled by sociological or demographic changes, such as the increasing proportion of the population age 65 and over. A recent study estimated that the elderly, who comprise one-tenth of the population, account for more than one-third of hospital-care days, one-fifth of surgical procedures, almost one-third of total personal health-care expenditures, and one-fourth of hospital discharges. The biggest share of expenses is attributable to those near death: one-third of Medicare expenses are incurred by the 6 percent of Medicare recipients in their final year of life.<sup>3</sup> Another researcher estimated approximately 1 percent of GNP is now spent on elderly persons in their last year.<sup>4</sup> In addition, as a larger percentage of women enter the work force people must increasingly satisfy their need for low or intermediate-level medical care by purchasing the services of nursing homes. Moreover, the increased mobility of workers and retirees separates older generations from younger family members. These trends toward higher mobility and greater female labor force participation reinforce the demand spurred by the relative increase in numbers of the elderly, who are the most likely to use nursing-care facilities.

**Relative Growth.** The share of nonfarm employment derived from health care rose nationally from 5.5 percent in 1971 to 7.4 percent in 1981. In the Southeast, the industry's share increased from 4.3 to 6.4 percent. Although the medical industry's proportion of nonagricultural employment in the Southeast remained below that of the nation, a pattern of convergence is evident. This relatively more rapid growth in health-related jobs is attributable partly to the region's above-average population growth, resulting from in-migration. In addition, federal policies have been implemented to equalize the distribution of health professionals, especially in rural and poorer areas. Even so, the Southeast still lags behind the nation in its per capita availability of primary-care professionals.

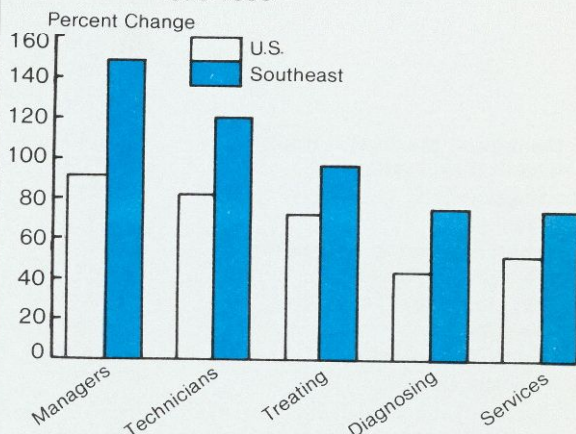
Hospitals, doctors' offices, and nursing facilities account for over 80 percent of health-care jobs, both nationally and in the Southeast. Despite the rapid growth rate of chiropractic and allied health service jobs, together they constituted less than one-tenth of the nation's and the Southeast's health-care jobs in 1981. Hospitals retain the largest share of such jobs, but this proportion declined from 59 percent in 1971 to 51 percent in 1981. This decrease is due primarily to the nation's declining birth rate and a faster growth rate in outpatient visits relative to inpatient visits.<sup>5</sup>

**Chart 1. Growth Rate of Health-Care Employment by Industry Segment 1971-1981**



Source: Calculated by Federal Reserve Bank of Atlanta from data in U.S. Department of Commerce, Bureau of the Census, *County Business Patterns*, Southeastern States and U.S., 1971 and 1981.

**Chart 2. Growth Rate of Health-Care Employment by Occupation 1970-1980**



Sources: Computed by Federal Reserve Bank of Atlanta from data in U.S. Department of Commerce, Bureau of the Census, *1980 Census of Population*, Table 217 (southeastern states, and Table 276 (U.S.), forthcoming.

The next largest component of the nationwide health industry is nursing and personal-care facilities. Nursing homes' share rose nationally but did not increase appreciably in the Southeast, where they rank third behind physicians' offices in terms of employment share. This pattern holds even in Florida, which is surprising since the percentage of elderly in Florida's population is much higher than the national proportion. Although employment in southeastern physicians' offices, the other large component, rose in absolute terms, growth of this industry segment was outdistanced by other categories of health care and its share of industry jobs changed only slightly.

### Growth of Health Occupations

The figures presented above and in Table 1 describe changes in the health-care industry according to the type of establishment—hospitals, doctors' offices, nursing homes—in which workers are employed. They do not distinguish between occupations such as doctors, nurses, therapists, clerical workers, or service personnel in any of these establishments. To understand the industry, however, it is important to identify changes in occupations as well. There are five major categories of health occupations: managerial, health diagnosing (physicians and dentists), health assessing

and treating (nurses, pharmacists, and therapists), health technicians (laboratory workers and licensed practical nurses, or LPNs), and health services (nurses aides and other service personnel).<sup>9</sup>

**Growth Rate.** An examination of changes in the occupational structure of the health industry indicates that managerial and technical/professional occupations increased most rapidly (see Chart 2). Health service jobs and physicians and dentists increased at a rate below the industry norm. From 1970 to 1980, occupations in the industry grew even more rapidly in the Southeast than in the nation. Increases in the technical/professional category were prompted largely by a rise in technical requirements as new services, such as intensive care units, became widespread. The next most rapidly growing major category was health assessing and treating occupations. An important catalyst of growth in this category was the Nurse Training Act, which from 1964 to 1975 provided substantial financial support for nurse training. U.S. funding for rehabilitation medicine raised the number of therapists sharply. Within this major category, therapist occupations in the Southeast more than tripled, the fastest growth of any of the narrower job categories. Even the slowest growing health occupations, such as physicians, dentists, and nurses aides, expanded at a faster pace than total employed persons, measured by occupation.

**Table 2.** Health Occupations, United States and Southeast, 1970 and 1980

	United States				Southeast			
	Absolute		Percent Share		Absolute		Percent Share	
	Difference 1970-80	Percent Increase	1970	1980	Difference 1970-80	Percent Increase	1970	1980
<b>Managers, Medical &amp; Health</b>	51,349	89.9	1.0	1.2	7,327	148.3	0.8	1.1
<b>Health Diagnosing</b>	193,129	42.9	7.8	7.0	31,039	74.5	6.9	6.5
Physicians	135,615	45.9	5.1	4.7	21,487	78.1	4.6	4.4
Dentists	29,879	31.5	1.6	1.3	5,319	61.0	1.5	1.2
<b>Health Assessing &amp; Treating</b>	711,310	72.3	17.0	18.3	95,527	96.3	16.5	17.3
Registered Nurses	516,091	68.8	12.9	13.7	65,687	88.8	12.3	12.4
Pharmacists	28,900	25.2	2.0	1.6	7,417	57.3	2.2	1.8
Therapists	113,757	148.8	1.3	2.1	14,464	226.3	1.1	1.9
<b>Health Technicians</b>	433,004	81.2	9.2	10.4	72,717	120.1	10.1	11.9
Clinical Labs	114,559	92.5	2.1	2.6	16,423	116.4	2.3	2.7
LPNs	163,778	62.7	4.5	4.6	32,057	107.2	5.0	5.5
<b>Health Services</b>	583,185	51.0	19.7	18.7	89,267	73.5	20.2	18.7
Nurses Aides	378,148	41.2	15.8	14.0	65,136	65.7	16.5	14.6
<b>Total Health</b>	3,452,704	59.5	100.0	100.0	523,867	87.2	100.0	100.0

Source: Computed by Federal Reserve Bank of Atlanta from data in U.S. Department of Commerce, Bureau of the Census, *1980 Census of Population, Table 217 (Southeastern States) and Table 276 (U.S.), forthcoming.*

**Absolute Gains.** Of the half-million new health jobs in the Southeast from 1970 to 1980, health assessing occupations, particularly nurses and therapists, experienced the largest absolute increase (see Table 2).<sup>7</sup> Volume gains in health services were nearly as large. Health technicians contributed the third largest number of jobs. The Southeast added fewer doctors and health managers over the decade. National trends followed the same pattern, with nursing jobs expanding the most and managerial jobs the least.

**Relative Growth.** Little restructuring of the occupational composition of health care occurred over the decade. Despite its comparatively slow growth rate, the major occupational category remains health services, of which nurses aides constitute the largest component. Health services' share of medical occupations fell slightly. The second largest category, health assessing and treating occupations, increased its share of jobs in the Southeast only slightly. The relative decline of nurses aides and the increase of LPNs, the largest component of health technicians, reflects an upgrading of credentials required. In spite of the rapid growth rate of health management

occupations, this category's share comprised only 1 percent of all health occupations in 1980.

## Distribution of Health Resources

**Distribution of Health-Care Personnel.** Notwithstanding the rapid growth of health-related jobs in the Southeast over the last decade, most states in this region remain below the U.S. average and median in availability of health-care providers.<sup>8</sup> As shown in Table 3, the number of nonfederally employed doctors and dentists, relative to population, was below the U.S. mean in every southeastern state except Florida in 1981. In rank as well, the supply of physicians remained below the U.S. median in every southeastern state except Florida. Similarly, the number of registered nurses relative to population was well below national norms in the same five southeastern states—Alabama, Georgia, Louisiana, Mississippi, and Tennessee. Except for Floridians, southerners rely more heavily on licensed practical nurses than on registered nurses. Southerners also seem to depend more on pharmacists for health care than on physicians: every



**Table 3.** Proportional Availability of Health-Care Resources, Southeastern States and United States

	Nonfederal Physicians <sup>a</sup> (1979)	Dentists <sup>a</sup> (1980)	Nurses <sup>a</sup> (1976)	LPNs <sup>a</sup> (1976)	Community Hospital Beds <sup>a</sup> (1981)	Nursing Home Beds <sup>b</sup> (1980)
United States	2.01	.55	3.80	1.91	4.4	58
Alabama	1.29	.37	2.23	2.34	5.2	48
Florida	2.31	.48	3.53	1.56	4.8	22
Georgia	1.53	.41	2.63	2.21	4.5	61
Louisiana	1.60	.43	2.45	1.99	4.6	57
Mississippi	1.13	.33	2.26	2.03	5.5	44
Tennessee	1.66	.50	2.33	2.86	5.3	43

<sup>a</sup>Per 1,000 population.

<sup>b</sup>Beds in nursing homes with 25 or more beds per 1,000 residents 65 and over.

Source: Data on nurses, LPNs from U.S. Department of Health, Education, and Welfare, Health Resources Administration, *Survey of Health Manpower* (December 1974), pp. 122, 178; data on doctors (MDs and DOs) and dentists from U. S. Department of Health & Human Services, Health Resources Administration, *Third Report to the President and Congress on the Status of Health Professions Personnel: The United States* (January 1982), pp. IV-99, VI-24; hospital and nursing home data from Department of Health & Human Services, National Center for Health Statistics, *Health, United States* (December 1983), pp. 167-68, 174-75.

southeastern state except Florida has more pharmacists per capita than in the nation.

Within the Southeast, as in the nation, the distribution of health jobs is skewed toward urban rather than rural areas (see Table 4). Birmingham, Tampa, Augusta, Shreveport, Jackson, Nashville, and Memphis have the largest proportional representation of health-care jobs in their respective states.<sup>9</sup> Unlike goods, services cannot be stored; they are consumed upon purchase. Nurses and doctors, like bootblacks and taxi drivers, usually must be present for an economic transaction to take place. In addition, many medical services are highly capital intensive. In order to use expensive medical equipment efficiently, it is necessary to have a threshold population base likely to need such facilities. On average, southeastern cities' share of health-care jobs is 12 percent more than their share of nonfarm employment.<sup>10</sup>

**Other Health Resources.** The rapid growth of the health industry in the Southeast is also evidenced by an increase in hospital beds. From 1972 to 1982 the number of hospitals in the region increased 13 percent, and beds rose 41 percent; nationwide there were 1 percent more hospitals and 15 percent more beds over the decade. Of course, the region's population growth

spurred much of this expansion, but on a proportional basis every southeastern state showed similar improvement. For example, from 1970 to 1981 the number of hospital beds per 1,000 residents grew from 4.3 to 4.4 in the nation but from 4.3 to 5.2 in Alabama. The 1974 National Health Planning and Resources Development Act required that "certificates of need" be obtained from local planning agencies before expansion or construction of new hospitals could be undertaken. Yet even after the act began to reverse the growth of hospital beds nationally, southeastern states continued to expand on a proportional basis, or declined less sharply than the national rate. The number of short-term hospital beds per 1,000 residents is higher in the Southeast than in the nation (see Table 3). Nursing-care facilities show a somewhat different pattern, with growth in homes and beds close to the national rate of 9 percent from 1976 to 1980. Nursing home beds per 1,000 residents age 65 and over remain below the U.S. norm, and no clear pattern of convergence is evident. However, Florida's extremely low index partly reflects discrepancies in classification. Many of the state's resort communities have patient-care facilities for their residents, but these are not classified as nursing homes.

**Table 4.** Concentration Ratios of Health Employment in Selected Southeastern SMSAs,<sup>a</sup> 1970 and 1980

	1970	1980
<b>Alabama SMSAs</b>	1.10	1.21
Birmingham	1.15	1.39
<b>Florida SMSAs</b>	1.00	1.04
Miami	1.03	1.07
Tampa	1.13	1.21
Ft. Lauderdale	0.93	1.09
Jacksonville	0.85	0.90
West Palm Beach	0.94	1.04
Orlando	0.95	0.85
<b>Georgia SMSAs</b>	1.21	1.11
Atlanta	1.14	0.99
Augusta	1.71	2.16
<b>Louisiana SMSAs</b>	1.10	1.14
New Orleans	1.11	1.18
Baton Rouge	0.95	0.93
Shreveport	1.20	1.31
<b>Mississippi SMSAs</b>	1.59	1.35
Jackson	1.59	1.44
<b>Tennessee SMSAs</b>	1.20	1.18
Memphis	1.23	1.23
Nashville	1.32	1.25
Chattanooga	0.93	1.04
Knoxville	1.19	1.18
<b>Southeastern SMSAs</b>	1.12	1.12

<sup>a</sup>Does not include health administrators because category is small and comparable figures are not available.

Source: Computed by Federal Reserve Bank of Atlanta from data in U.S. Department of Commerce, Bureau of the Census, *1970 and 1980 Census of Population, General Social and Economic Characteristics* (various states), Table 121 (1980) and Table 171 (1970).

its share of jobs. Median earnings remained below all-industry norms: earnings of full-time workers in the health-care industry increased to only 81 percent of general levels by 1978. Earnings of nursing-home workers were only 57 percent of the median by 1978. Overall earnings are even lower because health-care employees are more likely to work part-time than workers in other industries. One-fifth of health-care employees work part-time, whereas in general only one in seven employees does so. Lower earnings and hours are related also to the industry's large female composition. Women comprise 75 percent of the industry compared with 42 percent of the work force.<sup>11</sup>

**Costs.** Rapid health-care industry growth has been accompanied by a rate of cost increases in excess of the Consumer Price Index (CPI). Except during periods of rapid inflation induced by war or exogenous shocks, such as energy crises, medical care costs historically have outpaced the CPI. Although a dramatic reduction in the inflation rate has occurred over the past few years, this improvement had little effect on medical costs. Price increases slowed from an 8.9 percent growth rate in the period December 1980 to December 1981 to 3.9 percent in the following 12-month period, whereas medical inflation slowed from 12.5 to 11.0 percent. Medical cost increases slowed somewhat subsequently. In April 1984 medical costs were 6 percent ahead of April 1983, while prices in general were 4.5 percent higher. However, this modest deceleration means that the rate of price increases in the health-care industry is even faster now relative to the CPI than it was during the peak period of general inflation.

Hospitals have been the major source of medical inflation in recent years. From December 1977 to December 1983 hospital room costs rose 106 percent while medical costs overall rose 75 percent. Physicians' services increased slightly more slowly than medical costs in general over this period, and prescription drugs slightly faster. Even the rate of hospital cost increases decelerated recently: as of April 1984 the 12-month growth rate of hospital room costs was 8.6 percent.<sup>12</sup>

**Expenditures.** Increasing aggregate health costs are reflected in the industry's increasing share of gross national product (GNP). In 1983 the output of the industry amounted to 11 percent of GNP, up from 8 percent in 1973 and 6 percent in 1965. Hospitals accounted for almost half the 1983 figure. Over the last decade, the average

## Industry Earnings, Costs, and Expenditures

**Earnings.** Although health care has been an important source of new jobs, the industry's performance when measured by earnings is less impressive. The share of nonfarm earnings attributable to the industry was 6.1 percent in 1981, whereas its share of nonfarm jobs was 7.4 percent. In the Southeast, the industry's contribution to nonfarm earnings was closer to but still less than

length of hospital stays declined as did the number of hospital beds per capita, but the number of tests doubled and the number of operations grew three times as fast as the population.<sup>13</sup>

Regionally, health expenditures have remained below national levels. With the exception of Florida, whose expenditures slightly exceed the norm, per capita personal health-care expenditures in southeastern states range from 75 to 91 percent of the national average. Alabama, Georgia, Louisiana, and Mississippi ranked in the bottom third of expenditures by state. Nursing home expenditures are substantially lower, with all six southeastern states ranked in the bottom third of per capita expenditures. Florida and Tennessee residents spend less than 60 percent of the U.S. average, and the other states in the region spend about three-fourths of the U.S. norm.<sup>14</sup> However, expenditures have been increasing more rapidly in the Southeast. In addition, prices tend to be lower in the region and so partly offset variations in expenditures. Expenditures for hospital care are closer to the U.S. mean and median. One reason for this disparity between hospital and other types of medical expenditures might be the relatively high unemployment rates in certain areas of the Southeast. Unemployed who lose work-related insurance often seek care for routine medical needs in an emergency room, where charges are substantially higher than those levied for treatment in a doctor's office.

## Why the Health-Care Industry Has Grown

The aging population and federal measures to promote training and capital expansion have been stimulants to growth in health care. The factors do not, however, account for patients' ability to afford increasingly expensive medical care, labor force entrants' ability to find jobs in the industry, and the growth of the industry as a whole. Economists who have examined health care have developed several competing explanatory models: one focuses on demand characteristics peculiar to the industry and two others emphasize the lack of normal competitive market mechanisms.

**Induced Demand.** A widely advanced explanation of health-care industry growth is grounded in the concept of price elasticity, whereby demand for most goods is inversely related to their price. The spread of third-party health-care payments, in the form of insurance or welfare, has reduced the price of medical care directly borne

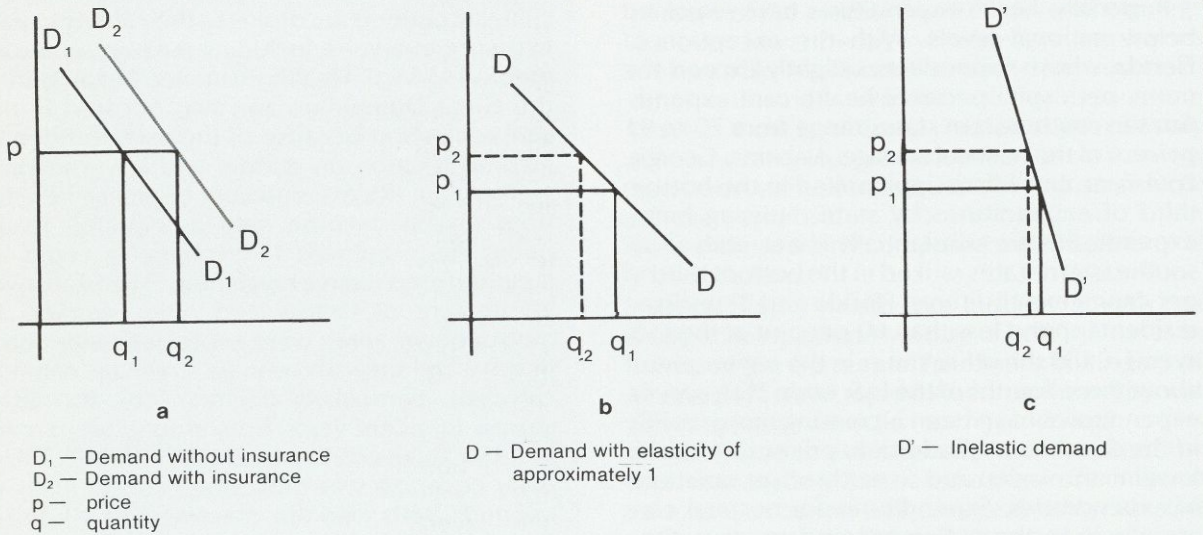
by consumers. Price elasticity would suggest this drop in price should be accompanied by increased demand for medical services.

Historically, doctors indirectly provided health insurance by means of price discrimination, charging patients according to their ability to pay. In theory, everyone, including the poor, received medical service. Health insurance began during the Great Depression and was boosted in the postwar period because of the rising burden of income taxation on middle and lower income workers, the IRS exemption of insurance benefits from taxable income, and a Supreme Court ruling that employee fringe benefits could be included in collective bargaining.<sup>15</sup> By 1970, over 90 percent of factory and office workers in metropolitan areas were protected with some hospital and surgical coverage. Coverage of medical costs, particularly doctors' fees, increased sharply in recent years, from around 60 percent in 1960 to over 90 percent by 1976.<sup>16</sup> Third-party coverage was broadened substantially in the mid-1960s with the enactment of Medicare and Medicaid legislation, which extended medical insurance to the elderly and indigent. These programs were implemented to achieve greater equity in the distribution of health services.

Critics argue that this broad expansion of third-party payments stimulates demand in two respects. At any given price, consumers demand more medical care than they would otherwise because they do not directly bear the full cost, which is paid ultimately through higher insurance rates and higher taxes.<sup>17</sup> Insurance thus can be treated as a shift in the demand curve for health care to the right, from  $D_1$  to  $D_2$  (see Chart 3a). Fiscal policy exacerbates this induced demand as health insurance benefits are not classified as taxable income. Furthermore, this exemption spurs employers to contribute to health benefits instead of wages, for employees receive 20 to 50 percent more than they would with an equivalent wage increase. For example, only 50¢ to 80¢ of an extra dollar in wages is left after taxes to purchase health care, but the same dollar paid through an employer-based insurance plan buys a full dollar's worth of medical care.<sup>18</sup> The health-care industry is thus boosted by a tax subsidy, estimated at \$6 billion in 1975.<sup>19</sup>

Insurance also reduces the price elasticity of demand for medical services by desensitizing consumers to the full effects of higher prices. Since insurance covers a large portion of a price

**Chart 3. Elasticity of Demand for Medical Care**



Source: Federal Reserve Bank of Atlanta.

increase, consumers are unlikely to reduce demand by an amount equal to the full price increase. Insurance not only reduces consumers' price sensitivity but distorts demand toward more expensive, covered services like inpatient hospital care. If insurance covers many health charges through a cost-based reimbursement method, consumers have little reason to respond to price increases by reducing demand commensurately. As elasticity approaches a vertical slope, a rise in health care prices does little to reduce the level of demand (see Chart 3b,c).

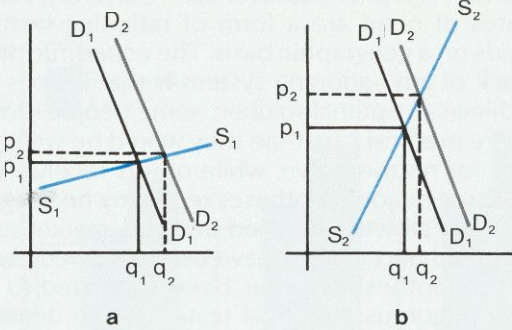
If the price elasticity/demand shift explanation of health-care industry growth is valid, it implies the need for policy changes. The first might be to discourage the spread of insurance coverage, for example, by capping employers' deductions for health insurance premiums, as Congress recently proposed. A second change might be to align consumers' medical costs more closely with actual costs by charging higher deductibles or requiring copayment for more services, especially routine medical care, as some employers and insurers are beginning to do. However, advocates

of alternative explanations of industry growth doubt that increased deductibles would lead to a more efficient allocation of resources (e.g., health-care labor) because of distortions in the health-care market.

**Market Failure.** Economists who emphasize market failure point out that increased demand for services would not automatically increase average medical costs. The impact that shifts in the demand schedule and changes in elasticity ultimately have on prices depends on the elasticity of supply. If supply were highly "price elastic," increased demand could more readily increase output than prices (see Chart 4a). It is the inelasticity of the industry's supply schedule, they argue, that is critical in the rapid inflation in medical costs, since an increase in demand quickly pushes the industry to capacity and forces prices higher (Chart 4b).

Medical care prices are high because the industry, functions as an "oligopoly," wherein power is wielded by a relatively limited number of suppliers who are not price-takers but price-setters. As the first-line suppliers of health care,

**Chart 4. Elasticity of Supply for Medical Care**



- S<sub>1</sub> — Elastic Supply
- S<sub>2</sub> — Inelastic Supply
- D<sub>1</sub> — Demand without insurance
- D<sub>2</sub> — Demand with insurance
- p — price
- q — quantity

Source: Federal Reserve Bank of Atlanta.

physicians can direct subsequent consumption of surgical, hospital, and pharmaceutical goods and services. Widespread price discrimination, through which physicians levy fees in accordance with patients' ability to pay, is evidence of such price-setting behavior.

Medical care output does not respond to higher prices induced by the industry's oligopolistic market because of the substantial barriers to entry. The supply of physicians is restricted by professional associations' control over medical education and licensing. Quackery was widespread in 1846 when the American Medical Association was founded to improve professionalism through licensing and medical education. Barriers to entry were raised by the expense and long training period required of physicians. Not only is the supply of physicians restricted, but so are the alternatives. Whereas the auto industry offers consumers a broad array of choices, ranging in price and fuel economy and allowing for imperfect substitutions such as public transportation, bicycling, and walking, medical care is a "Cadillac-only" industry, all of whose products are high-priced. The high cost of modern medical equipment also inhibits entry.

During the postwar period, the federal government addressed supply problems in two respects. The Hill-Burton Act of 1947 stimulated hospital construction in rural and underserved areas such

as the Southeast. Then, beginning in the 1960s, a series of acts was passed to increase medical manpower. The Health Profession's Educational Assistance Act of 1963 authorized loans for medical students and construction of medical schools. The Allied Health Professions Personnel Training Act increased enrollment in occupational and physical therapy. The Health Manpower Act enlarged the student loan program and otherwise expanded support for nursing and pharmacy schools. In the early 1970s, legislation promoted the training of nurse practitioners and physicians' assistants for underserved areas.<sup>20</sup>

If barriers to entry were the critical factor in the rapidly rising health-care costs, then these federal measures should have lowered unit costs, as increased supplies intensified competition and drove prices down. Price increases have been slow to abate, however. The fundamental factor in the divergent supply behavior may be that medical-care prices function in a manner unlike that of most industries. Higher prices raise supplier incomes more than they reduce demand for medical services. Critics of the barriers-to-entry argument thus maintain that measures to increase supply do not reduce costs because the basic incentive system, grounded in the unique relationship between buyer and seller in the health-care market, remains unchanged. This relationship, they argue, is grounded in uncertainty.

**Uncertainty.** Consumers are uncertain what health-care products or services they require because information in this market is unequal; that is, the consumer's medical knowledge is necessarily far less than the physician's.<sup>21</sup> Physicians alone possess the information required to make rational decisions about goods and services necessary for treatment and cure. Thus, the consumer-supplier relationship is not at arm's length, as in most markets, but is rather one of trust. Because of this "agency" relationship, physicians conform to professional norms designed to preclude self-interest and profit-maximization.

The medical profession's adaptation to this peculiarity of the health-care industry results in a suboptimal allocation of resources. In a normal market, individual demand is determined by the price of goods, income constraints, and tastes. Suppliers also pursue their own self-interest, maximizing profits by producing additional goods and services to the point where marginal revenues equal marginal costs. The resulting level of prices and output is an equilibrium situation whereby each individual determines his level and mix of

services; no other allocation of resources would improve the position of all participants. No intervention on the part of government or trade associations is necessary, except perhaps in the area of distribution; subsidies or taxes are sometimes indicated to make purchasing power more equitable.

In the health-care industry, however, the inequality of information possessed by consumers and physicians and the vital nature of health care render profit-maximization by suppliers unethical. At the same time uncertainty enervates the effect of prices on consumer choices, thereby worsening price inelasticity on the demand side. Critical medical choices are made not by consumers (patients) but suppliers (physicians), whose cost consciousness is muted by professional standards requiring them to pursue patient well-being with little consideration for prices or income constraints. Since reimbursement until recently has been cost-based, most hospital administrators also have had little incentive to control costs. Some analysts maintain that hospital managers overinvest in capital equipment because availability of the latest technology is deemed necessary to attract and retain the best doctors, who are the chief source of customers.<sup>22</sup>

If market failure is the key factor in the rapid growth of the health-care industry, merely dampening demand by raising deductibles or requiring copayments would have only an insignificant effect on aggregate costs. Suppliers, not consumers, would continue to make the decisions critical to costs because the information possessed by each group would remain unequal. Costs must be controlled by altering supplier incentives, and rationing has been one widespread method for achieving this change.

Public intervention in health care is more extensive in most developed countries than in the United States. In many nations, the desire for equity in the ability to purchase such a life-and-death commodity as health care has resulted in universal health insurance financed through taxation. In countries following this pattern, cost increases that ensue from rising demand are held in check by a rationing system on the supply side. In Great Britain, for example, middle-aged and elderly citizens can obtain kidney dialysis treatment only outside the public-sector medical system. Queues for regular medical services are long in such countries. Rationing services to stem spiraling increases in medical costs in the United

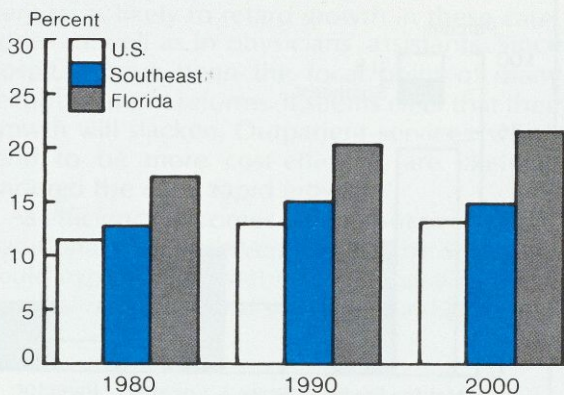
States was recommended this year both by a Brookings Institution study and by the South-eastern Hospital Conference.<sup>23</sup> Currently, certificates of need are a form of rationing hospital beds on a geographic basis. The economic drawback of any rationing system is that it does not achieve an optimal solution: some people receive more medical care than they would be willing to pay for on their own, while others receive less.

Three major hypotheses regarding health-care industry growth—induced demand, market structure, and uncertainty—have been reviewed above. The hypothesis that has been subjected to the most rigorous empirical testing is the demand-inducing effect of third-party payments.<sup>24</sup> Even the simplest historical review of growth trends in the industry suggests the greater importance of demand factors. Demand has changed significantly over the last three decades through the spread of insurance, whereas doctor-patient relationships and physicians' oligopolistic competition have remained constant or diminished. The concept of uncertainty has been thoroughly specified theoretically but not as well supported empirically.<sup>25</sup> However, private sector initiatives to resolve industry distortions emphasized by the uncertainty concept are increasing rapidly. All of the hypotheses focus on price elasticity, as do reform measures, and so changes in the industry during the next decade should be influenced largely by greater price elasticity on both the demand and supply sides.

## Outlook and Implications

**Demographic Trends.** The nation's aging population suggests that demand for health care will continue to rise, since the elderly consume a disproportionate amount of medical services. This aging phenomenon should have a special impact on certain southeastern states because a larger proportion of population in the region will be elderly (see Chart 5). In 1980, residents over age 65 composed 13 percent of the Southeast's population, compared with 11 percent of the nation's. Florida had the largest component of residents age 65 or over (17 percent) but Alabama and Mississippi also had a slightly larger percentage of elderly residents than the nation. By 1990, more than one-fifth of all Floridians will be 65 or over compared with 13 percent for the nation. Alabama and Tennessee also are expected to have a slightly higher-than-national proportion of senior citizens. By the year 2000, Florida's

**Chart 5.** Projected Shares of Population 65 and Over, U.S. and Southeast



Source: Computed by Federal Reserve Bank of Atlanta from data in U.S. Department of Commerce, Bureau of the Census, *Provisional Projections of the Population of States, by Age and Sex: 1980 to 2000*, Series P-25, No. 937 (August 1983), Table 4.

share should rise to 22 percent while the nation's reaches 13 percent.

This demographic trend suggests that hospitals and nursing-care facilities will continue to expand as a source of jobs as they respond to rising demand for their services. The Southeast, however, has not sought market solutions for nursing care to the extent that other regions have. The number of beds in nursing facilities per capita is lower in this region than elsewhere in the United States. Moreover, demographic trends reflect only need, not economic demand. Changes in medical prices, brought about through third-party payment systems, could dampen this potential demand by making it more difficult for the elderly and others to afford medical care.

**Third-Party Payments.** In the private sector, employers' efforts to control benefit costs should result in higher deductibles and premiums. These in turn are likely to diminish effective demand for medical care and thereby retard employment growth in traditional health occupations and industries. Congress already has increased deductibles and copayments for certain publicly-covered treatments. If congressional action to control medical costs continues, a cap on tax-free health benefits could win approval, complementing efforts by insurers and employers to harness medical expenditures.

Of course, doctors still will direct most consumption decisions. In the past, costs have increased when doctors pointed patients toward treatment methods covered by insurance rather than toward less-expensive, uncovered alternatives. However, many employers and insurers have instituted incentives to foster patient use of lower-cost alternatives, such as outpatient surgery. Later this year Blue Cross-Blue Shield of Tennessee will begin reimbursement of home hospice care for terminally ill patients. For every \$1 of hospice costs, the insurer expects to save \$7 in hospital costs. Such incentives are having an effect nationwide: hospital outpatient care has declined for several years, while ambulatory outpatient services have risen.

**HMOs.** Health maintenance organizations are likely to be another constraint on health-care costs. HMOs, formerly called "closed panel group practices," represent a private-sector alternative to the health-care industry's market failure as highlighted by the uncertainty hypothesis. Rather than replicating the market model, HMOs increase the degree of integration among consumers, suppliers, and third-party payers. In this situation, similar to a large corporation or conglomerate, all parties share a common interest in controlling costs while maximizing health. HMOs began in California in 1933 when Henry Kaiser established a plan to keep his engineering workers healthy by having them prepay 10 cents a day for medical care. HMOs have gained sharply in popularity since 1973, when federal legislation mandated that employers begin offering such benefits as an alternative to traditional insurance plans. According to the federal Office of Health Maintenance Organizations, enrollment in the Southeast increased from 100,000 in 1976 to 428,000 in 1983; nationwide enrollment more than doubled over this period, reaching 12.5 million by 1983. The growth of HMOs should be furthered by recently implemented government incentives for the nation's 30 million Medicare recipients to join HMOs. The continued growth of HMOs augurs better control of costs and greater consideration of productivity when health-care staffing is increased.

**DRGs.** The change in Medicare reimbursement from a cost-based system to Diagnostic Related Groups (DRGs) is among the most important recent measures to control costs. Under the new system, hospitals will be reimbursed a fixed amount for each illness or injury. This change provides an incentive for hospitals to reduce

costs because they can retain the difference between the DRG reimbursement and their actual costs; however, they will not be reimbursed for charges in excess of DRGs. This system was piloted in New Jersey and at the end of 1983 began to be implemented in stages nationwide. Extending this system from hospital fees to medical fees is already under consideration. Recent enactment of DRG legislation and its pending extension to doctors' fees suggest a deceleration in both inflation and staff growth. In fact, some southeastern hospitals already are laying off employees even though DRGs are being phased in over several years. Hospitals in this region have fewer full-time equivalent employees per patient, but their occupancy rates are lower than elsewhere in the nation.

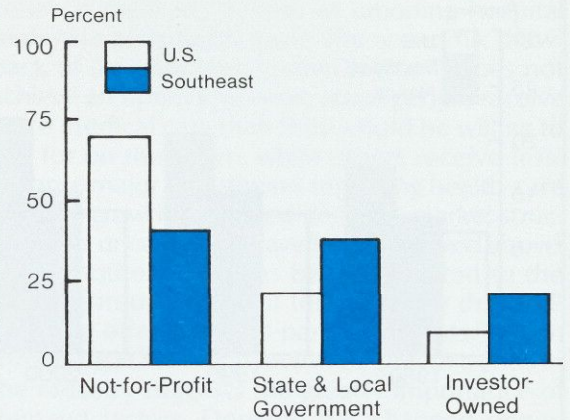
**For-Profit Sector.** Another force likely to check growth in health-care employment and other costs is the rise of for-profit firms in the industry. One source forecasts a 22 percent annual growth rate for hospital management companies. These firms theoretically are better attuned to efficient allocation of resources and should help improve the performance of hospitals and nursing homes.<sup>26</sup>

For-profit health care companies have been growing rapidly and their profitability is above average. For example, the return on equity of 15 leading private companies in health-care averaged 19.9 percent over the past five years compared with 15.1 percent for all industries. This return exceeded even that of the computer industry and was surpassed only by brokerage and tobacco firms. Sales grew by 16.2 percent per year in comparison with an all-industry median of 12.4 percent. Only energy, office equipment, brokerage, and specialty retail companies' revenues grew faster.<sup>27</sup>

The large supply of doctors and dentists should encourage continuing growth in retail medical services such as emergency outpatient surgical centers.<sup>28</sup> In the Southeast, the gap between nursing homes and probable future demand should spur the home health-care segment of for-profit providers. Medical merchandise marts are being considered in several southeastern cities, including Ft. Lauderdale, Tampa, and Nashville.

For-profit sector growth is especially significant in this region because such firms have expanded operations more rapidly in the Sunbelt, including many areas of the Southeast, than elsewhere. Beds in investor-owned hospitals increased 60 percent in the U.S. from 1972 to 1982, but 189 percent in the Southeast. One-fifth of the beds in

**Chart 6.** Share of Hospital Beds by Ownership  
U.S. and Southeast, 1982



Source: Computed by Federal Reserve Bank of Atlanta from American Hospital Association data.

the region are now in proprietary hospitals, up from one-tenth a decade ago, whereas nationally such hospital beds rose from 7 to 9 percent over the period (see Chart 6). On a per capita basis, the proportion of beds in southeastern for-profit hospitals is more than twice the national share. Rapid population growth and a more conducive regulatory climate are the main reasons for the faster growth of for-profit hospitals in this region. Moreover, a number of hospital management firms are headquartered in the Southeast.

## Conclusion

The complexity of the health-care industry makes it difficult to determine its precise heading, particularly without the support of a formal model to estimate the influence each of these cost-cutting policies may have. Nonetheless, the industry's future over the next decade appears to promise slower but continuing growth and more productivity consciousness in the expansion of jobs. The U.S. Commerce Department projects a growth rate of 10.2 percent over the next five years compared with a 13.4 percent pace over the past five.<sup>29</sup> Health management jobs are likely to remain the fastest growing occupational category because the move toward cost control should intensify demand for management skills in the delivery of health care. It is less obvious



which occupational categories will experience slower growth as a result of current policy reforms, but the already large number of doctors and dentists is likely to retard growth in these categories as well as in physicians' assistants. Since hospitals have been the focal point of many reimbursement reforms, it seems clear that their growth will slacken. Outpatient services, which tend to be more cost-efficient, are likely to undergo the most rapid growth.

As efficiency becomes paramount over equity, traditionally underserved areas of the Southeast could experience a setback in the availability of medical resources and services. Rural areas and

slow-growing states are likely to see sharper staffing cuts than urban areas and high growth states. Consumers with a greater need for medical care probably will have to bear a larger share of costs or forgo treatment. The relationship between medical expenditures and healthiness is not clear, and so any negative conclusions regarding the impact of this change must be drawn with caution. Nonetheless, the implications concerning the distribution of medical services are troubling compared with a decade ago in that the region's relatively high infant mortality rates indicate a greater need, especially on the part of certain disadvantaged social strata.<sup>30</sup>

#### NOTES

<sup>1</sup>The Southeast in this article refers to the six states included in the Sixth Federal Reserve District: Alabama, Florida, Georgia, Louisiana, Mississippi, and Tennessee.

<sup>2</sup>Figures given for allied health services and nursing-care facilities have been adjusted to maintain comparability across the time period despite taxonomic changes made in 1972.

<sup>3</sup>George von Haunalter, "Health Issues and Trends in the 1980s" (Palo Alto, California: SRI International, 1983), pp. 6-7.

<sup>4</sup>Victor R. Fuchs, "Though Much Is Taken—Reflections on Aging, Health, and Medical Care," Working Paper No. 1269 (Cambridge, Massachusetts: National Bureau of Economic Research, 1984), pp. 30-31.

<sup>5</sup>Edward S. Sekscenski, "The Health Services Industry: A Decade of Expansion," *Monthly Labor Review*, vol. 104 (May 1981), p. 10.

<sup>6</sup>Occupations related to the manufacture of medical instruments, supplies, and drugs are not included here because such occupations—operatives, sales, and technical and administrative support—are not available in a form disaggregated by industry and state.

<sup>7</sup>This number is larger than that given in the preceding section because it is based on a different sample, one drawn from households rather than business establishments.

<sup>8</sup>See Paula Breen, *Raising a New Generation in the South* (Research Triangle Park, North Carolina: Southern Growth Policies Board, 1981), pp. 21-37, for a more extensive description of continuing inadequacies in resources.

<sup>9</sup>Augusta's ratio of 2.16 signifies that its share of medical-care jobs is 2.16 times as large as its share of Georgia's employment overall.

<sup>10</sup>Roger A. Rosenblatt, "Health and Health Services," in *Nonmetropolitan America in Transition*, edited by Amos H. Hawley and Sara Mazie (Chapel Hill, North Carolina: University of North Carolina Press, 1981), used 1978 U. S. Department of Health, Education, and Welfare data to show that rural areas are underserved medically, according to a variety of measures.

<sup>11</sup>Sekscenski, "Health Services Industry," pp. 12-14.

<sup>12</sup>Computed from data in U. S. Department of Labor, Bureau of Labor Statistics, *CPI Detailed Report, December 1977* (February 1978), p. 25; *December 1981* (February 1982), pp. 10, 24; *December 1982* (February 1983), pp. 12, 26; *December 1983* (February 1984), pp. 7, 21; and *April 1984* (June 1984), p. 22.

<sup>13</sup>U.S. Department of Commerce, Bureau of Economic Analysis, *U.S. Industrial Outlook* (January 1984), p. 52-13.

<sup>14</sup>*Health, United States and Prevention Profile*, U.S. Department of Health and Human Services, Public Health Service (December 1983), Table 68, pp. 191-92; Table 77, pp. 189-90; and Table 78, pp. 191-92.

<sup>15</sup>Carol Fethke and S. Y. Wu, "A Historical Perspective on the Health Care Industry," *Health Communications and Informatics*, vol. 5, nos. 5-6 (1979) p. 267.

<sup>16</sup>U.S. Department of Labor, Bureau of Labor Statistics, *Handbook of Labor Statistics* (June 1979), pp. 284-85.

<sup>17</sup>Martin S. Feldstein, "The Welfare Loss of Excess Health Insurance," *Journal of Political Economy* (March/April 1973), pp. 251-79.

<sup>18</sup>Martin S. Feldstein, "The Medical Economy," *Scientific American*, vol. 229 (September 1973), pp. 151-56.

<sup>19</sup>Michael D. Intriligator, "Issues in the Economics of Health," in *Economic Issues of the Eighties*, edited by Nake Kamrany and Richard H. Day (Baltimore, Maryland: Johns Hopkins University, 1979), p. 120.

<sup>20</sup>Fethke and Wu, "Historical Perspective," pp. 278 ff. The training of physicians' assistants was in part motivated by a concern to find employment for the large number of medics who had served in the Vietnam War.

<sup>21</sup>Kenneth J. Arrow, "Uncertainty and the Welfare Economics of Medical Care," *American Economic Review*, vol. 53 (December 1963), pp. 941-73, was one of the first to develop the theoretical basis of this explanation of the health-care industry. See also, Robert G. Evans, "Incomplete Vertical Integration in the Health Care Industry: Pseudo-markets and Pseudopolities," *Annals of the American Academy*, vol. 468 (July 1983), pp. 68 ff.

<sup>22</sup>Joseph P. Newhouse, "Toward a Theory of Nonprofit Institutions: An Economic Model of a Hospital," *American Economic Review*, vol. 60 (March 1970), pp. 64-74; a similar theoretical argument is made by Mark Pauly and Michael Redisch, "The Not-for-Profit Hospital as a Physicians' Cooperative," *American Economic Review*, vol. 63 (March 1973), pp. 87-99.

<sup>23</sup>*Journal of Commerce*, February 10, 1984; *Atlanta Journal and Constitution*, April 7, 1984, p. 5-A.

<sup>24</sup>Karen Davis, "Theories of Hospital Inflation: Some Empirical Evidence," *Journal of Human Resources*, vol. 8, no. 2 (1973), pp. 181-201, challenges this view empirically. In a cross-sectional regression analysis, cost-reimbursement variables were not significantly correlated with hospital costs: hospitals with a high proportion of patients covered by cost-reimbursement insurance plans did not have higher costs than those with a low proportion of such patients. However, her data set overlapped the years when Medicare and Medicaid were introduced; therefore, as she admits, the announcement of these programs may have prompted a cost shift. Using patient survey data for the same periods, Paul B. Ginsburg et al., "Medicare and Health Services Utilization," in *Economics of Health Care* (New York: Praeger, 1982), pp. 181-96, found that economic variables declined in importance relative to need as determinants of medical care use among the elderly after the establishment of Medicare. Their research lends support to the demand-side, price elasticity hypothesis.

<sup>25</sup>Donald E. Yett et al., "A Model of Physician Pricing, Output, and Health Insurance Reimbursement: Findings from a Study of Two Blue Shield Plans' Claims Data," in *Economics of Health Care* (New York: Praeger, 1982), pp. 197-230, found physician pricing closer to the competitive than to the oligopolistic model.

<sup>26</sup>However, several studies found that average patient costs were slightly higher at for-profit hospitals than at comparable not-for-profit hospitals. See Arnold S. Relman, "Investor-Owned Hospitals and Health-Care Costs," *New England Journal of Medicine*, vol. 309 (August 11, 1983), pp. 370-72.

<sup>27</sup>*Forbes*, January 2, 1984, p. 214.

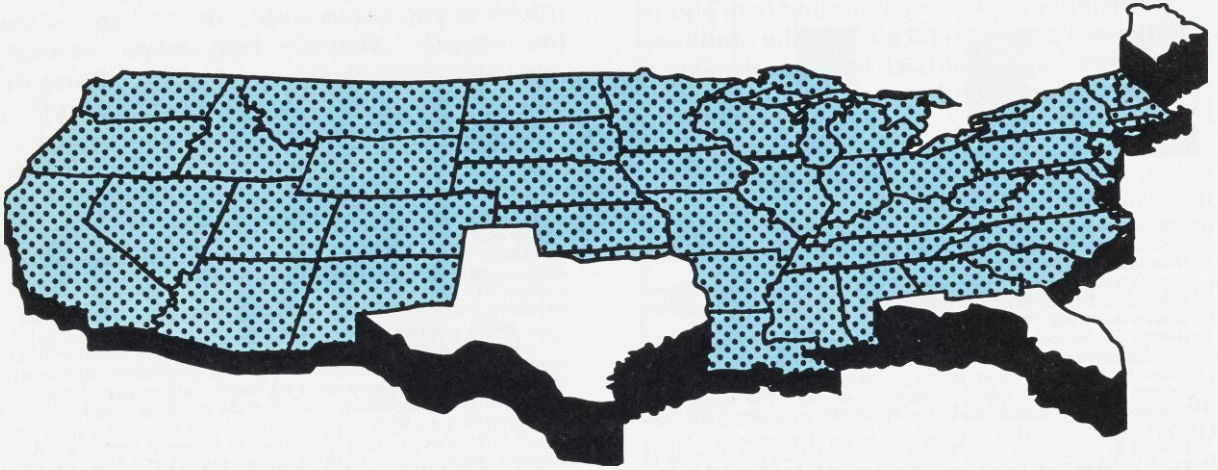
<sup>28</sup>Thomas W. Mader, "Health Services Markets" (Menio Park, California: SRI International, 1981).

<sup>29</sup>*U.S. Industrial Outlook*, p. 52-16.

<sup>30</sup>Southeastern states' infant mortality rates rank among the highest in the nation, ranging from 35th (Georgia) to 50th (Mississippi) despite a decade of federal measures designed to improve and equalize health resources across the nation.

# S&L Use of New Powers: A Comparative Study of State- and Federal-Chartered Associations

Robert E. Goudreau



The experience of thrift institutions in Texas, Maine, Florida, and the nation indicates that they are far from making full use of recently broadened powers. Their future course promises slow but steady adoption of these powers as S&Ls strengthen their competitive stance.

To boost the health of the nation's thrift industry, Congress approved the Depository Institutions Deregulation and Monetary Control Act of 1980 and the Garn-St Germain Depository Institutions Act of 1982. These were the first major concerted measures taken at the federal level to address fundamental causes of the thrift industry's misfortunes. Recognizing that the industry was awash in red ink, Congress expanded asset and liability powers for federal-chartered thrifts, enabling them to avoid problems associated with short-maturity liabilities and long-maturity assets. During this same period, Florida lawmakers enacted statutes that broadened asset and liability powers for their state-chartered thrifts. For example, Florida-chartered thrifts were empowered to grant consumer and commercial loans and to invest

in corporate obligations and service corporation subsidiaries.

However, expanded powers were first made available to Texas- and Maine-chartered thrift institutions in 1972 and 1975, respectively. As in Florida, the most notable expansion was in the area of consumer and commercial loan holdings. Legislators in Texas and Maine had the insight to assess the industry's lackluster profit potential and the initiative to enact much-needed changes. Although serious problems were perceptible in the early 1970s, few industry observers or participants had envisioned then that thrifts would find themselves in such dire straits at the turn of the decade.

Sustained high interest rates were the chief impetus to liberalized federal legislation in 1980 and 1982 and to the new Florida statutes. As they soared, interest rates dramatically escalated thrifts' cost of funds while only sluggishly increasing yields on their interest-earning assets.

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The high interest rates thrifts were forced to pay to attract and keep savings deposits resulted from several developments: economic circumstances that raised the general level of interest rates; intense competition from nonbank institutions offering money market mutual fund accounts; and an imbalance in the step-by-step deregulation of depository institutions.

Interest rates began rising sharply in 1977, inspiring the tremendous growth in nonbank money market mutual fund accounts. These money market funds, offering market interest rates, virtually instant liquidity, and eventually free but limited check-writing privileges, caused a profound drain on regulated, relatively low-yielding savings at depository institutions. To help redirect savings to depository institutions, regulatory agencies designed the six-month money market time deposit. This new account was introduced on June 1, 1978 with a variable interest-rate ceiling that moved with changes in the average yield on new issues of six-month Treasury bills. The minimum required deposit per account was \$10,000. Although the account attracted a substantial amount of savings, a large proportion came out of the offering institution's own lower-yielding time and savings deposits. This initial shift to high-yield short-term savings prompted the subsequent burgeoning of thrifts' cost of funds. Ironically, these hikes were exacerbated by enactment of the Depository Institutions Deregulation and Monetary Control Act of 1980 (henceforth DIDMCA), which called for the gradual removal of interest-rate ceilings on savings instruments. The act triggered a jump in rates paid on liabilities without a corresponding rise in asset yields.

The asset flexibility thrifts had gained from the act proved insufficient not only because of continued legislative constraints and portfolios predominated by long-term assets, but because of weak economic activity, particularly during the 1980-82 period. Thrifts added high-yielding mortgages to portfolios only modestly because home sales were generally at a standstill. Layoffs as well as personal and corporate income losses caused increased mortgage delinquencies that crimped earnings further, especially in regions hard-hit by the recession. Furthermore, unfavorable publicity about the thrift industry's poor earnings convinced some depositors to put their money elsewhere. Ongoing competition from money market mutual funds and

additional competition from new financial conglomerates contributed heavily to the savings drain. At the same time, more traditional competition from commercial banks, credit unions, and insurance companies continued.<sup>1</sup>

The results of this study indicate that S&Ls have not used their newly granted powers to anywhere near the extent allowed, as the experience for Texas, Maine, Florida, and the nation suggests. Because they seem likely to adopt these powers at only a slow but steady pace in the future, they will continue to encounter problems associated with nondiversification, such as vulnerability to the real estate cycle. Consequently, S&Ls are not in head-to-head competition with commercial banks and apparently will not be for some time. Associations' use of new powers will increase because they must reduce their interest-rate risk exposure; however, managerial reluctance to sail in unfamiliar waters likely will restrain the degree of expansion.

A number of studies regarding thrift use of new powers have been published in recent years; for example, Alan A. McCall and Manfred O. Peterson (1980), Robert Baker (1982), John Crockett and Thomas A. King (1982), Robert A. Eisenbeis (1983), and Constance R. Dunham and Margaret Guerin-Calvert (1983). These works focus primarily on thrift behavior at the state level (Texas, Maine, and Florida), regional (New England), or the national level. The Federal Reserve Bank of Atlanta decided to add to that pool of knowledge by using recent data to examine state- and federal-chartered S&L balance sheet behavior for all three states that broadened asset and liability powers for their state-chartered associations early on, and to look at diversification from a nationwide perspective. (For the same geographical groupings, a future *Economic Review* article will examine the pace and momentum at which the differently chartered S&Ls availed themselves of broadened powers.)

The primary purpose of our study is to provide a statistical analysis that helps evaluate how state-chartered and federal-chartered savings and loan associations have taken advantage of opportunities presented by the power-broadening statutes. These statutes were designed to enhance thrift viability by allowing a closer matching of maturities on assets and liabilities, thereby reducing interest-rate risk exposure and stabilizing earnings and profits. Potentially

**Table 1.** New S&L Powers Granted by State and Federal Legislation

New Powers	Texas	Maine	Florida	United States — Federally Chartered Thrifts	
	(Effective August 3, 1972)	(Effective October 1, 1975)	(Effective July 1, 1980)	(DIDMCA, effective March 31, 1980)	(Garn-St Germain, effective October 15, 1982)
Consumer Loans	Make consumer loans with essentially no percent-of-assets limitation.	Grant consumer loans up to 10 percent of total deposits.  Make "prudent" loans, including consumer loans, up to 10 percent of total deposits.	Extend consumer loans of any type or amount. <sup>12, 13</sup>	Grant consumer loans up to 20 percent of total assets. <sup>16</sup>	Extend consumer loans up to 30 percent of total assets. <sup>18</sup>
	Issue credit cards.	Issue credit cards.	Issue credit cards.	Issue credit cards.	
Educational Loans	Yes	Yes	Yes	Make educational loans (for any educational purpose) up to 5 percent of total assets.	
Commercial Loans	Make commercial loans with essentially no percent-of-assets limitation.	Participate in commercial loans with Maine commercial banks up to 10 percent of total deposits.  Make "prudent" loans, including commercial loans, up to 10 percent of total deposits.  Extend additional commercial loans, originating or participating, up to a percentage to be determined by the superintendent of banking.	Make commercial loans of any type or amount. <sup>12, 13</sup>	Extend commercial real estate loans up to 20 percent of total assets.	Grant commercial real estate loans up to 40 percent of total assets.  Make commercial loans, direct loans or participations, up to 5 percent of total assets prior to January 1, 1984 (7.5 percent of total assets for savings banks), and thereafter up to 10 percent of total assets.
Real Estate Development	Yes <sup>1</sup>	Yes	Yes <sup>14</sup>	No	No
Unsecured Construction Loans	Yes <sup>2</sup>	Yes, if considered to be "prudent."	Yes	Yes <sup>17</sup>	
Investment in Obligations of State and Local Governments	Yes	Yes. Also allowed to invest in obligations issued and guaranteed by the Dominion of Canada and any province or political subdivision thereof.	Yes <sup>15</sup>	Yes	
Investment in Obligations not Guaranteed by U. S. Government	Yes, if obligation appears on an "approved" list or permission obtained from the state commissioner on an ad hoc basis. <sup>3</sup>	Yes	Yes <sup>15</sup>	Yes	
Investment in Corporate Obligations (including commercial paper)	Yes, if permission obtained from State Commissioner on an ad hoc basis. <sup>3</sup>	Yes	Yes <sup>15</sup>	Invest in commercial paper and corporate debt securities up to 20 percent of total assets. <sup>16</sup>	Invest in commercial paper and corporate debt securities up to 30 percent of total assets. <sup>18</sup>
Investment in Time and Savings Accounts	Yes, if investment is in sav-	Yes <sup>9</sup>	Yes. May invest in time and Yes. Up to 5 percent of	No Allocate up to 3 percent of	Invest in time and savings accounts of thrift institu-

Investment in Time and Investment	Yes, if investment is in sav-	Yes <sup>3</sup>	Yes. May invest in time and Yes. Up to 5 percent of total assets may be placed in a service corporation subsidiary. Increased to 10 percent on July 1, 1982.	NO	Allocate up to 3 percent of total assets to a service corporation.
Business Investment Companies	No <sup>4, 5</sup>	Yes <sup>11, 4</sup>	No <sup>4</sup>	No	Invest in small business investment companies up to 10 percent of total assets.
Investment in Tangible Personal Property and Engaging in Equipment Leasing	No <sup>4</sup>	No <sup>4</sup>	No <sup>4</sup>	No	Invest in tangible personal property and engage in equipment leasing combined up to 10 percent of total assets.
Trust Activities	No <sup>3, 6</sup>	Yes	Yes	Engage in trust activities, provided state laws are not contravened.	
Remote Service Units	No <sup>3</sup>	Yes	Yes	Establish remote service units.	
NOW (Interest-Earning Negotiable Order of Withdrawal) Accounts	No <sup>3, 7</sup>	Yes, but only when federal law permits such acceptance. Federal law was altered to allow NOW accounts for individuals throughout New England beginning March 1, 1976. <sup>3, 4</sup>	Yes <sup>4</sup>	Accept NOW accounts from individuals and not-for-profit organizations.	Accept NOW accounts from governmental units.
NINOW (Noninterest-Earning Negotiable Order of Withdrawal) Accounts	No <sup>3, 8</sup>	No. <sup>3</sup> In 1981, authorized to accept NINOW accounts from customers who had established a business loan relationship. Loan relationship requirement eliminated in 1983.	Yes, with no loan relationship required.	Accept NINOW accounts from individuals.	Accept NINOW accounts from persons or organizations that have established a "business, corporate, commercial or agricultural loan relationship" with the institution.
Demand Deposits	No <sup>4</sup>	Yes, but for personal checking accounts only. <sup>4</sup>	Not explicitly stated.	No	Accept demand deposits from persons or organizations that have established a "business, corporate, commercial or agricultural loan relationship" with the institution.

Sources: Texas Savings and Loan Act, Article 852a, Vernon's Texas Civil Statutes; Maine Bureau of Banking, Laws Regulations, and Bulletin, Maine Revised Statutes Annotated, Title 9B Financial Institutions, Laws 1975, Chapter 500; Florida Savings Association Act, Chapter 665, Savings, Savings and Loan, and Building and Loan Associations, F.S. 1981; Depository Institutions Deregulation and Monetary Control Act of 1980, Public Law 96-221, March 31, 1980; and Garn-St Germain Depository Institutions Act of 1982, Public Law 97-320, October 15, 1982.

<sup>1</sup>Effective July 1967.

<sup>2</sup>Provided that loans to any one borrower do not exceed \$50,000 or 25 percent of an association's net worth, whichever is greater.

<sup>3</sup>Granted parity with federally chartered associations effective March 31, 1980.

<sup>4</sup>Granted parity with federally chartered associations effective October 15, 1982.

<sup>5</sup>Only through subsidiaries.

<sup>6</sup>Authorized in accordance with State Attorney General's opinion issued November 25, 1980.

<sup>7</sup>As of January 1981, NOW account acceptance was unlimited, except for corporate customers.

<sup>8</sup>As of January 1981, acceptance was authorized without regard to a requisite loan relationship.

<sup>9</sup>Allowed to place funds in certificates of deposit of financial institutions authorized to conduct business in Maine and in insured certificates of deposit issued by non-Maine banks and thrifts.

<sup>10</sup>May allocate up to 50 percent of a thrift's total capital and reserves or its total surplus account to a service corporation subsidiary.

<sup>11</sup>May invest in small business investment companies that are located and conducting business in Maine.

<sup>12</sup>Subject to the requirement that at least 60 percent of a thrift's "nonliquid" assets must be placed in real estate loans or interests therein on home property or primarily residential property for terms not in excess of 40 years.

<sup>13</sup>Requirement reduced to 50 percent of a thrift's "nonliquid" assets as of July 1, 1982.

<sup>14</sup>Up to the lessor of net worth or 10 percent of total assets.

<sup>15</sup>Subject to an aggregate 25 percent-of-total-assets limitation. The aggregate limitation includes obligations of state and local governments, nonguaranteed obligations of federal agencies and corporate obligations.

<sup>16</sup>The 20 percent-of-total-assets limitation applies to consumer loans, commercial paper and corporate debt securities combined.

<sup>17</sup>Provided unsecured construction loans do not exceed the sum of a thrift's general reserves, surplus and undivided profits or 5 percent of total assets, whichever is greater.

<sup>18</sup>The 30 percent-of-total-assets limitation refers to the aggregate of consumer loans, commercial paper and corporate debt securities.

they could transform thrifts to resemble commercial banks more closely. Such a transformation would increase bank-thrift competition, which in turn would have notable effects on antitrust decisions and on both business and individual consumers of financial services.<sup>2</sup> More bank, thrift, or bank-thrift mergers could be permitted if market shares of both types of depository institutions were considered in merger applications.<sup>3</sup> And, heightened competition would benefit the purchasers of financial services because commercial banks and thrifts likely would provide a wider array of services at lower prices, presumably with the same or higher quality.

Our study sought to answer the following questions:

- 1) Have savings and loan associations availed themselves of expanded consumer and commercial lending powers authorized in the relevant state and federal legislation?
- 2) If so, have these institutions deemphasized their traditional commitment to mortgage lending on residential real estate?
- 3) Have the expanded powers improved the liquidity of state- and federal-chartered S&Ls?
- 4) Are associations taking advantage of statutes authorizing them to invest in service corporations?
- 5) What effect have the power-broadening statutes had on the importance of NOW (interest-earning negotiable order of withdrawal) and NINOW (noninterest-earning negotiable order of withdrawal) accounts in the liability management strategies of affected associations?

These questions focus on specific balance sheet changes that indicate the degree to which affected S&Ls have taken advantage of certain new powers, with the determining forces being profit opportunity and ease of change. Additionally, these changes indicate, albeit inconclusively, the probable future direction and extent of change in S&L balance sheets.

The technique we employed to help answer these questions is the standard statistical two-sample t test.<sup>4</sup> We used this test to determine if state- and federal-chartered S&Ls in Texas, Maine, and Florida, as well as the nation, have exhibited statistically significant divergent asset/liability behavior. The data analyzed are for the four years ending with June 30, from

1980 to 1983. The Florida experience is unique because only a handful of Florida-chartered S&Ls existed for long prior to July 1, 1980. Thus the post-legislation balance sheets of Florida's de novo associations and its federal-chartered S&Ls that converted to state-chartered associations can be examined to compare the bold or novel initiatives taken by de novo institutions with the asset/liability behavior of converted S&Ls, which likely were constrained by managerial inertia, investment commitments, and restricted liquidity.

## Principal Points of Legislation

Thrifts were granted powers, particularly consumer and commercial loan powers, that banks—their major competitors for savings deposits—already possessed. The array of new powers granted to thrifts by various state and federal legislation is displayed in Table 1. A detailed comparison of the additional powers available to the nation's federally chartered thrifts with those thrifts chartered by Texas, Maine, and Florida is given below. The comparison is meant to determine if and when affected state thrifts received broadened powers comparable to the combined set of new powers conferred on federal-chartered thrifts through DIDMCA (March 31, 1980) and the Garn-St. Germain Act (October 15, 1982).

**Assets.** In general, federal-chartered thrifts were allowed to extend consumer loans up to 30 percent of total assets as of October 15, 1982; the initial allowance authorized by DIDMCA was 20 percent.<sup>5</sup> Texas statutes authorized state-chartered thrifts to make consumer loans essentially free of any percent-of-assets limitation beginning August 3, 1972; and the October 1, 1975 Maine law authorized state-chartered thrifts to make consumer loans up to 10 percent of total deposits, and allowed an additional maximum 10 percent extension of consumer loans under prudent loan rules.<sup>6</sup> As of July 1, 1980, Florida-chartered thrifts could grant consumer loans of any type or amount with the proviso that at least 60 percent of a thrift's "nonliquid" assets be placed in real estate-related loans or interests. DIDMCA expressly authorized thrifts to issue credit cards to individuals, as did the Texas, Maine, and Florida laws, and authorized federal-chartered thrifts to make loans for any educational purpose up to 5 percent of total assets. The Texas,

Maine, and Florida acts allowed thrifts to grant educational loans with only minor restrictions, if any.

The Garn-St Germain Act authorized federal-chartered thrifts to grant commercial real estate loans up to 40 percent of total assets, and to make direct or participating commercial loans up to 5 percent of assets (7.5 percent for savings banks) prior to January 1, 1984 and thereafter up to 10 percent. DIDMCA initially allowed for the extension of commercial real estate loans up to 20 percent of a thrift's assets. As of August 1972, Texas-chartered thrifts could make commercial loans with essentially no percent-of-assets limitation, while Maine-chartered thrifts, as of October 1975, could participate with Maine commercial banks in commercial loans up to 10 percent of total deposits and make prudent loans, including commercial loans, up to 10 percent of deposits. Maine stipulated that an additional allowance up to 10 percent for making commercial loans, direct or participating, was to be determined by the State Superintendent of Banking; in 1981 the department granted the additional 10 percent. As of July 1980, Florida-chartered thrifts could grant commercial loans of any type or amount if 60 percent of an institution's nonliquid assets were in real estate-related loans or interests.

Congress chose not to extend real estate development powers to federally chartered thrifts, but Texas authorized state-chartered thrifts to engage in development as early as 1967. Maine- and Florida-chartered thrifts could engage in real estate development beginning in 1975 and 1980, respectively. DIDMCA allowed federally chartered thrifts to make unsecured construction loans as did the respective August 1972, October 1975, and July 1980 laws for Texas, Maine, and Florida. Federally chartered thrifts in 1980 and state-chartered thrifts in Texas, Maine, and Florida in 1972, 1975, and 1980, respectively, received authority to invest in guaranteed U.S., state, and local obligations, as well as various obligations not guaranteed by the U.S. government. Maine-chartered thrifts, moreover, could invest in obligations issued and guaranteed by the Dominion of Canada and any Canadian province or political subdivision.

Garn-St Germain allowed federal-chartered thrifts to allocate up to 30 percent of assets to commercial paper and corporate debt securities;

the constraint imposed by DIDMCA was 20 percent.<sup>7</sup> Statutes granted Texas-, Maine-, and Florida-chartered thrifts commercial paper and corporate debt investment powers in 1972, 1975, and 1980, respectively. Garn-St Germain allowed federally chartered thrifts to invest in time and savings deposits of thrift institutions beginning in October 1982; however, thrifts chartered in Texas, Maine, and Florida first won similar powers, with some restrictions, with the enactment of their respective statutes.

As of March 1980, federally chartered thrifts could allot up to 3 percent of assets to a service corporation. The 1972 Texas legislation did not grant this authority, but general parity provisions of the Texas legislation allowed state-chartered thrifts to engage in this activity up to 3 percent of assets coincident with the enactment of DIDMCA. (Texas, Maine, and Florida laws contain general parity provisions that authorize their state-chartered thrifts to engage in any thrift activity permitted by federal law.) As of October 1975, Maine-chartered thrifts could allocate up to 50 percent of the amount of their total capital and reserves or their total surplus account to a service corporation subsidiary. The July 1980 Florida law authorized state-chartered thrifts to place up to 5 percent of their assets in a service corporation subsidiary; on July 1, 1982 the limit rose to 10 percent.

In October 1982, the nation's federal-chartered thrifts received authorization to invest a maximum of 10 percent of assets in small business investment companies. Maine-chartered thrifts as early as October 1975 could invest in small business investment companies that were located in Maine and conducted business there. Respective state laws granted competitive equality regarding small business investment companies to institutions chartered in Texas, Maine, and Florida in October 1982.

The Garn-St Germain Act authorized federal-chartered thrifts to invest in tangible personal property and engage in equipment leasing combined up to 10 percent of assets. State-chartered thrifts received competitive equality upon the enactment of Garn-St Germain. DIDMCA allowed federally chartered thrifts to engage in trust activities provided state laws were not contravened. Maine- and Florida-chartered thrifts could engage in trust activities as of 1975 and 1980, respectively, but Texas-chartered thrifts had to wait until November 25, 1980 when the State Attorney General

approved such activities in an opinion. Federal-chartered thrifts received permission to establish remote service units under DIDMCA. Thrifts chartered in Maine and Florida received this authority in 1975 and 1980, respectively, and Texas-chartered thrifts secured this power in March 1980 when general parity provisions allowed such establishment.

**Liabilities.** The 1980 federal legislation authorized thrifts to accept NOW accounts from individuals and not-for-profit organizations. Later, under the provisions of Garn-St Germain, federally chartered thrifts were allowed to accept NOW accounts from governmental units. Texas' 1975 law did not authorize NOW account acceptance, but general parity provisions regarding acceptance from individuals and not-for-profit organizations became effective March 31, 1980. In January 1981, NOW account acceptance by Texas-chartered thrifts became unlimited, except from corporations. The 1975 Maine legislation authorized the acceptance of NOW account deposits, but only when permitted by federal law; federal law was altered to allow NOW accounts for individuals throughout New England beginning March 1, 1976. Maine-chartered thrifts received competitive equality with federal-chartered institutions regarding acceptance from not-for-profit organizations and governmental units upon the enactment of DIDMCA and Garn-St Germain. The 1980 Florida legislation allowed thrifts to accept NOW accounts; general parity provisions expanded this authority to include governmental units.

DIDMCA authorized NINOW account acceptance from individuals and the Garn-St Germain Act expanded this authority to include people or organizations that had established a "business, corporate, commercial or agricultural loan relationship" with the institution. Garn-St Germain also allowed demand deposit acceptance with the above-stated requisite loan relationship. Texas' general parity provisions allowed NINOW account acceptance from individuals upon the enactment of DIDMCA. In 1981, Texas statutes granted NINOW and demand deposit powers for business accounts without imposing a loan relationship requirement.

The 1975 Maine law granted demand deposit acceptance powers to its state-chartered thrifts but only for personal checking accounts. General parity provisions allowed demand deposit acceptance from people or organizations that had

established the loan relationship stipulated by Garn-St Germain; Maine law eliminated the loan relationship requirement in 1983. The state's general parity provisions authorized NINOW acceptance from individuals in 1980. Legislators in 1981 granted Maine-chartered thrifts the authority to accept NINOW accounts from business customers who had established a commercial loan relationship; as with demand deposits, the loan requirement was eliminated in 1983. Finally, the 1980 Florida law allowed NINOW account acceptance from business customers without requiring any loan relationship; demand deposit powers were not explicitly addressed in the 1980 law.

## Empirical Evidence and Statistical Inference

Some insight into how quickly S&Ls exploited their liberalized powers can be gleaned from examining data for various years. In this section, we will examine two-sample t tests for various balance sheet ratios. The tests are used to determine whether state legislation authorizing broader asset/liability powers for Texas-, Maine-, and Florida-chartered savings and loan associations contributed to greater balance-sheet diversification vis-a-vis their respective federally chartered counterparts. Florida-chartered institutions are subdivided further into de novo formations and conversions from federal to state charter. This breakdown should highlight the increased flexibility and freedom purportedly available to de novo associations as they chose among alternatives. Two-sample t tests are calculated also for national data to ascertain the efficacy of congressional legislation in prompting federal-chartered associations to diversify their balance sheets.

The ratios for which we calculated two-sample t tests are total loans, mortgage loans, consumer loans, commercial loans, liquid investments, and investment in service corporations, each as a percent of total assets.<sup>6</sup> Also, NOW accounts and NINOW accounts are computed individually as a percent of total liabilities. Semiannual financial statements of condition for S&Ls are unavailable prior to December 1979; therefore, asset and liability developments for the differently chartered S&Ls in Texas and Maine from the inception of expanded powers (1972 and 1975, respectively) cannot



**Table 2.** FSLIC-Insured Savings and Loan Associations-Texas

As a Percent of Total Assets	June 30, 1980	June 30, 1981	June 30, 1982	June 30, 1983
	Mean/Confidence Level	Mean/Confidence Level	Mean/Confidence Level	Mean/Confidence Level
Total Loans	.844(F) *** .788(S)	.866(F) *** .836(S)	.845(F) * .818(S)	.837(F) .864(S)
Mortgage Loans	.819(F) *** .756(S)	.822(F) *** .766(S)	.802(F) *** .745(S)	.794(F) .784(S)
Consumer Loans	.024(F) .025(S)	.043(F) .062(S) ***	.041(F) .063(S) ***	.041(F) .070(S) ***
Commercial Loans	.000(F) .006(S) ***	.000(F) .006(S) ***	.000(F) .009(S) ***	.001(F) .009(S) ***
Liquid Investments	.103(F) .122(S) *	.101(F) .110(S)	.102(F) .102(S)	.140(F) * .115(S)
Investment in Service Corporations	.002(F) .003(S) *	.002(F) .005(S) ***	.003(F) .008(S) ***	.004(F) .013(S) ***
<b>As a Percent of Total Liabilities</b>				
NOW (Interest- Earning) Accounts	.000(F) .000(S)	.008(F) .014(S) ***	.013(F) .023(S) ***	.026(F) .036(S)
NINOW (Noninterest- Earning) Accounts	.000(F) .000(S)	.000(F) .003(S) *	.000(F) .007(S) ***	.001(F) .012(S) ***

F - Federal charter.

S - State charter.

\*\*\* 99% confidence level.

\*\* 98% confidence level.

\* 95% confidence level.

Source: Federal Reserve Board Database.

be measured. Behavioral patterns can be measured for the other two geographical areas from the start, however, because the power-broadening provisions for Florida were enacted on July 1, 1980 and federal acts were signed into law on March 31, 1980 (DIDMCA) and on October 15, 1982 (Garn-St Germain).

**Texas and Maine.** One would expect that portfolio composition for state- and federal-chartered S&Ls within Texas and Maine would diverge significantly, since state-chartered associations had many years to take advantage of broadened powers. However, the 1980 two-sample t tests calculated for these states show markedly dissimilar results (see Tables 2 and 3). Texas-chartered S&Ls' balance sheets were

noticeably different from their federally chartered counterparts', while balance sheets for Maine-chartered S&Ls displayed no statistically significant disparity from federally chartered associations in that state.

Most of the ratios for Texas were statistically significant; that is, we can reject with a certain level of confidence the hypothesis that no difference exists between the June 30, 1980 means of the corresponding ratios for Texas' state- and federal-chartered S&Ls (see Table 2). For example, the hypothesis for total loans as a percent of total assets can be rejected with a 99 percent level of confidence, as it can be for the comparable mortgage loan and commercial loan ratios. A 95 percent confidence level is

**Table 3. FSLIC-Insured Savings and Loan Associations-Maine**

As a Percent of Total Assets	June 30, 1980	June 30, 1981	June 30, 1982	June 30, 1983
	Mean/Confidence Level	Mean/Confidence Level	Mean/Confidence Level	Mean/Confidence Level
Total Loans	.851(F) .854(S)	.885(F) .858(S)	.874(F) .846(S)	.801(F) .819(S)
Mortgage Loans	.829(F) .829(S)	.842(F) .812(S)	.830(F) .802(S)	.744(F) .768(S)
Consumer Loans	.023(F) .024(S)	.043(F) .046(S)	.044(F) .043(S)	.051(F) .050(S)
Commercial Loans	.000(F) .000(S)	.000(F) .000(S)	.000(F) .000(S)	.005(F) .001(S)
Liquid Investments	.100(F) .097(S)	.082(F) .110(S)	.088(F) .117(S)	.138(F) .133(S)
Investment in Service Corporations	.000(F) .000(S)	.000(F) .000(S)	.000(F) .000(S)	.000(F) .000(S)
<b>As a Percent of Total Liabilities</b>				
NOW (Interest- Earning) Accounts	.038(F) .022(S)	.042(F) .023(S)	.045(F) .023(S)	.051(F) ** .020(S)
NINOW (Noninterest- Earning) Accounts	.000(F) .001(S)	.000(F) .001(S)	.000(F) .001(S)	.002(F) .001(S)

F - Federal charter.  
S - State charter.  
\*\* 98% confidence level.

Source: Federal Reserve Board Database.

indicated for the liquid investment and investment in service corporations ratios. In brief, by 1980 Texas-chartered S&Ls had taken advantage of a portion of their broadened lending powers, particularly in the area of commercial loans, while the state's federally chartered S&Ls remained more heavily committed to traditional mortgage lending. The two differently chartered Texas S&Ls had pursued consumer lending about equally, with each type holding about 2.5 percent of total assets in consumer loans.

Over the three years following 1980, a number of interesting changes occurred. Most important, Texas-chartered S&Ls became more highly concentrated in both consumer and commercial lending vis-a-vis the state's federal-chartered associations. Texas-chartered S&Ls held a notably larger proportion of total liabilities in NINOW accounts, which presumably were opened in

connection with commercial loans, and they emphasized service corporation investments. The significant disparity between state- and federal-chartered associations in total lending and mortgage lending disappeared. In sum, by 1983 Texas-chartered S&Ls were more highly concentrated in consumer and commercial loans, NINOW accounts, and service corporation investments than were their federal counterparts, but equally distributed in total loans and mortgage loans. Consumer loans for Texas-chartered S&Ls comprised a considerable 7 percent of total assets whereas commercial loans, although significantly different from those held by federal associations, comprised only 0.9 percent. Perhaps the difficulty of attracting commercial loan accounts from well-established competitors, high start-up costs, and Texas' sluggish oil-bust economy precluded S&Ls from

**Table 4.** FSLIC-Insured Savings and Loan Associations-Florida

As a Percent of Total Assets	June 30, 1980	June 30, 1981	June 30, 1982	June 30, 1983
	Mean/Confidence Level	Mean/Confidence Level	Mean/Confidence Level	Mean/Confidence Level
Total Loans	.866(F) .777(S)	.873(F) *** .619(S)	.860(F) *** .604(S)	.836(F) *** .687(S)
Mortgage Loans	.853(F) .763(S)	.854(F) *** .596(S)	.840(F) *** .558(S)	.813(F) *** .642(S)
Consumer Loans	.012(F) .013(S)	.018(F) .019(S)	.019(F) .039(S) *	.023(F) .037(S)
Commercial Loans	.000(F) .000(S)	.000(F) .002(S)	.000(F) .006(S) **	.000(F) .008(S) **
Liquid Investments	.089(F) .154(S)	.084(F) .293(S) ***	.092(F) .262(S) ***	.117(F) .261(S) ***
Investment in Service Corporations	.003(F) .004(S)	.003(F) .006(S)	.004(F) .017(S)*	.006(F) .015(S)*
<b>As a Percent of Total Liabilities</b>				
NOW (Interest-Earning) Accounts	.000(F) .000(S)	.012(F) .027(S) **	.019(F) .036(S) **	.041(F) .059(S)
NINOW (Noninterest-Earning) Accounts	.000(F) .000(S)	.000(F) .002(S)	.001(F) .018(S)	.001(F) .015(S) ***

F - Federal charter.  
S - State charter.

\*\*\* 99% confidence level.

\*\* 98% confidence level.

\* 95% confidence level.

Source: Federal Reserve Board Database.

gaining any appreciable commercial lending market share during most of this three-year period.

Even though the legislative underpinning for Maine-chartered S&L lending and investment was similar to that for Texas, the statistical results for the two states differ. Table 3 shows that Maine's state- and federal-chartered associations possessed essentially the same balance sheet structures in 1980, despite roughly five years of expanded powers for the former. Three years later, disparities still had not surfaced, except for a relatively higher concentration of NOW accounts for federal-chartered associations. But that does not mean sizable changes had not taken place. Indeed, from 1980 to 1983 state- and federal-chartered S&Ls in Maine altered their balance sheets almost in lockstep,

possibly because of greater competition. During that period associations reduced total loans and mortgage loans as a percent of total assets. For both groups, consumer loans rose to about 5 percent of total assets in 1983 compared with 1980's approximate 2.5 percent, and commercial loans rose weakly from zero in 1980 to 0.5 percent and 0.1 percent for federal- and state-chartered institutions, respectively.

**Florida.** The June 30, 1980 balance sheet structures for the differently chartered S&Ls in Florida offer no surprises since the statutes granting new powers to state-chartered S&Ls were not effective until July of that year. In 1980 state- and federal-chartered S&Ls operating in Florida possessed virtually identical balance sheet ratios (see Table 4). Over the following three years, though, federal-chartered S&Ls

**Table 4a.** FSLIC-Insured Savings and Loan Associations-Florida  
State-Chartered De Novo Formations and Conversions (Federal to State)

<b>As a Percent of Total Assets</b>	June 30, 1980 Mean/Confidence Level	June 30, 1981 Mean/Confidence Level	June 30, 1982 Mean/Confidence Level	June 30, 1983 Mean/Confidence Level
Total Loans	.815(C) .660(D)	.859(C) *** .476(D)	.840(C) *** .534(D)	.750(C) .649(D)
Mortgage Loans	.797(C) .648(D)	.824(C) *** .456(D)	.785(C) *** .491(D)	.688(C) .609(D)
Consumer Loans	.017(C) .011(D)	.031(C) .018(D)	.049(C) .036(D)	.047(C) .034(D)
Commercial Loans	.000(C) .000(D)	.004(C) .002(D)	.004(C) .006(D)	.020(C) .005(D)
Liquid Investments	.089(C) .266(D)	.076(C) .419(D)	.070(C) .322(D) ***	.096(C) .304(D) ***
Investment in Service Corporations	.004(C) .003(D)	.010(C) .005(D)	.022(C) .015(D)	.039(C) *** .010(D)
<b>As a Percent of Total Liabilities</b>				
NOW (Interest-Earning) Accounts	.000(C) .000(D)	.009(C) .037(D) ***	.017(C) .041(D) **	.024(C) .067(D) *
NINOW (Noninterest-Earning) Accounts	.000(C) .000(D)	.001(C) .003(D)	.003(C) .023(D)	.015(C) .016(D)

C - Conversion.

D - De Novo.

\*\*\* 99% confidence level.

\*\* 98% confidence level.

\* 95% confidence level.

Source: Federal Reserve Board Database.

became significantly more concentrated in total loans and mortgage loans as a percent of total assets, while Florida-chartered associations placed greater emphasis on commercial lending, liquid investments, investment in service corporations, and NINOW accounts (presumably, commercial loan-related).

Consumer lending by Florida's differently chartered associations deserves special comment (see Table 4). No significant variation in consumer lending behavior was registered in 1980 for state- and federal-chartered S&Ls, which is not surprising since both were granted expanded consumer lending powers within months of each other. However, consumer loans as a percent of total assets stood at only 2.3 percent for federal-chartered S&Ls and 3.7

percent for Florida-chartered associations on June 30, 1983. Considering the Sunshine State's general economic prosperity and the traditional consumer orientation of the savings and loan industry, these figures reflect relatively slow growth. The persistent profitability of Florida's residential real estate may have continued to provide an attractive alternative to consumer lending. An increased desire for liquidity also may have contributed to Florida S&Ls' relatively modest growth in consumer lending. (By comparison, in 1983 Texas-chartered S&Ls held a prominent 7 percent of total assets in consumer loans versus 4.1 percent for their federal counterparts, and Maine's state- and federal-chartered S&Ls devoted about 5 percent of total assets to consumer lending.)

**De Novo and Converted S&Ls.** Table 4a illustrates the varied balance sheet behavior of Florida's de novo and converted institutions. De novo associations registered a comparatively higher concentration in NOW accounts and relatively lower emphasis on total loans and mortgage loans as of mid-1981. A year later the situation was essentially the same, except for a greater concentration in liquid investments for the state's de novo S&Ls. As of June 30, 1983, however, several changes had occurred: the disparities for total loans and mortgage loans had disappeared; de novo associations continued to place markedly greater emphasis on liquid investments and NOW accounts; and converted Florida-chartered S&Ls for the first time posted a comparatively higher concentration in service corporation investment. In sum, unlike converting institutions, de novo S&Ls apparently ventured off on new paths, holding far less in total loans and mortgage loans and more in NOW accounts as of mid-1981. But as of mid-1983, state-chartered de novo S&Ls were essentially similar to converted associations in total loans and mortgage loans, while de novo institutions were dramatically more liquid and continued to hold relatively more in NOW accounts.

Remembering that only a handful of Florida-chartered S&Ls existed for long prior to July 1980 and disregarding the balance sheet disparities between the de novo and converting institutions, we see that Florida's state-chartered de novo formations and conversions diversified considerably more than the Sunshine State's federally chartered associations by using many of their newly acquired powers. As Table 4 shows, notwithstanding statistical significance, Florida-chartered S&Ls posted comparatively higher ratios for consumer and commercial loans, liquid investments, investment in service corporations, NOW accounts, and NINOW accounts. Florida's federal-chartered associations placed relatively greater emphasis on total loans and mortgage loans, the traditional mainstay of the industry. Hence, it is plausible that many state-chartered de novo formations and conversions—which presumably create institutions intent on achieving diversification through use of broadened powers—can appreciably influence the degree of diversification between state- and federal-chartered associations. The Texas and Maine experiences corroborate this view.

From 1972 to 1980, fully 73 associations (246 Texas-chartered S&Ls were in existence on June 30, 1980) received Texas charters through either de novo formations or conversions. By mid-1980, divergent balance sheet behavior could be discerned between the Lone Star State's state- and federal-chartered associations. The influence of these diversification-seeking Texas-chartered institutions apparently continued to be felt: noticeable balance sheet differences persisted three years later despite the numerous expanded powers made available to federal-chartered S&Ls during that time. In Maine, only one association obtained a state charter from 1975 to 1980 (11 Maine-chartered associations were extant on June 30, 1980) and the data for 1980 indicate that balance sheets for Maine- and federal-chartered S&Ls were essentially the same. Furthermore, no Maine-chartered associations came into existence from 1980 to 1983. Accordingly, similar balance sheets are evident for Maine's state- and federal-chartered S&Ls in 1983, with only NOW accounts as a percent of assets differing significantly.

**United States.** The balance sheet diversification pattern for the United States is similar to that for Texas (see Tables 2 and 5). In 1980, federally chartered S&Ls nationwide were significantly more concentrated in total loans and mortgage loans as a percent of total assets and also in NOW accounts as a percent of total liabilities; state-chartered associations were more concentrated in commercial loans, liquid investments, investment in service corporations, and NINOW accounts. Over the next three years, none of these categories changed in terms of the emphasis placed on them by either type of association, with the exception of consumer loans and NOW accounts. State-chartered S&Ls' consumer loan activity rose relative to their federal counterparts', and the disparity for NOW accounts disappeared.

The most plausible explanation for the balance sheet disparities between the nation's two types of S&Ls as of June 30, 1980 is the contribution that Texas- and Maine-chartered associations made to total assets for the nation's state-chartered institutions. Their 11 percent share of total assets probably was a large enough proportion to affect the two-sample t test data appreciably.<sup>9</sup> The Texas-chartered institutions' portion alone was 10.7 percent. And for June 1983, the combined share of total assets for Texas-, Maine-, and Florida-chartered

**Table 5.** FSLIC-Insured Savings and Loan Associations-United States

As a Percent of Total Assets	June 30, 1980	June 30, 1981	June 30, 1982	June 30, 1983
	Mean/Confidence Level	Mean/Confidence Level	Mean/Confidence Level	Mean/Confidence Level
Total Loans	.857(F) *** .835(S)	.866(F) *** .838(S)	.846(F) *** .818(S)	.830(F) *** .819(S)
Mortgage Loans	.839(F) *** .816(S)	.837(F) *** .804(S)	.818(F) *** .782(S)	.799(F) *** .780(S)
Consumer Loans	.017(F) .018(S)	.028(F) .032(S) ***	.028(F) .034(S) ***	.030(F) .036(S) ***
Commercial Loans	.001(F) .001(S) ***	.000(F) .001(S) ***	.000(F) .002(S) ***	.001(F) .003(S) ***
Liquid Investments	.096(F) .108(S) ***	.094(F) .112(S) ***	.102(F) .114(S) ***	.130(F) .142(S) ***
Investment in Service Corporations	.002(F) .003(S) ***	.003(F) .004(S) ***	.004(F) .005(S) ***	.004(F) .007(S) ***
<b>As a Percent of Total Liabilities</b>				
NOW (Interest- Earning) Accounts	.001(F) ** .001(S)	.009(F) .010(S) **	.014(F) .016(S) ***	.027(F) .030(S)
NINOW (Noninterest- Earning) Accounts	.000(F) .001(S) ***	.000(F) .001(S) ***	.000(F) .002(S) ***	.001(F) .003(S) ***

F - Federal charter.  
S - State charter.  
\*\*\* 99% confidence level.  
\*\* 98% confidence level.

Source: Federal Reserve Board Database.

associations compared with the nation's state-chartered S&L aggregate was 18 percent.<sup>10</sup> This share is sufficiently large to affect the data, particularly if federal-chartered associations were slow to take advantage of their newly granted powers.

Although federally chartered associations nationwide remained more specialized in total loans and mortgage loans, a sizable reduction in these categories occurred for both types of S&Ls from 1980 to 1983 (see Table 5). Federally chartered associations during this period decreased total loans from 1980's 85.7 percent of assets to 83 percent, and pushed mortgage loans down from 83.9 percent in 1980 to 79.9 percent in 1983. Total loans for the nation's state-chartered S&Ls dropped from 1980's 83.5

percent to 81.9 percent in 1983, and mortgage loans fell from 81.6 percent for 1980 to 1983's 78 percent. For consumer loans, no significant difference was recorded in 1980 but state-chartered S&Ls manifested a comparative specialization in 1983. The consumer loan level rose from a 1.7-1.8 percent range for 1980 to 1983's moderate 3 percent of assets for federal-chartered associations and 3.6 percent for state-chartered S&Ls. Although state-chartered institutions consistently logged a relative commercial loan concentration vis-a-vis federal S&Ls, their level remained minuscule: in 1983 the ratio was only a few tenths of one percent.

In sum, for the ratios most directly related to the newly conferred powers, state-chartered S&Ls were comparatively more concentrated

than federal associations in consumer loans, commercial loans, liquid investments, investment in service corporations, and NINOW accounts. NOW account acceptance was basically the same for both types of institutions, roughly 3 percent of total liabilities. Federally chartered associations continued to emphasize traditional residential real estate lending. Notwithstanding the differences between them, both groups fell far short of achieving the degree of diversification attainable under law. Even considering the increased credit risk that accompanies rapid expansion of loan portfolios and the overall economic downturn of that three-year period, growth in consumer and commercial loans indeed was languid in light of S&Ls' urgent need to lessen their interest-rate risk exposure. For example, the 30 percent-of-assets stipulation for federally chartered S&L holdings of consumer loans remained a distant constraint; as of June 30, 1983, these institutions' consumer loan portfolios totaled only 3 percent of assets. Furthermore, commercial loans for federal-chartered associations, which could have expanded dramatically, stood at a puny 0.1 percent of assets, and their investment in service corporations was a minor 0.4 percent compared with the allowable 3.0 percent.

### **First-Year Response: Florida and the Nation**

Florida-chartered associations' first-year response (1980-1981) to expanded powers was striking compared with the first-year response (1982-1983) to the enactment of Garn-St Germain by federally chartered S&Ls nationwide (see Tables 4 and 5). The fact that the population of Florida-chartered associations consisted almost entirely of de novo formations and recent federal-to-state charter conversions likely accounts for the dramatic difference. Management at these organizations purposely took the state-charter route because they desired to diversify, either immediately or within a reasonable period of time. The most marked initial-year changes for Florida-chartered S&Ls occurred in total loans, mortgage loans, liquid investments, and NOW accounts. Total loans for the Sunshine State's state-chartered S&Ls tumbled from 77.7 percent of assets to 61.9 percent between June 30, 1980 and June 30, 1981, and mortgage loans plunged from 76.3 percent to 59.6 percent.

Liquid investments meanwhile leaped from 15.4 percent of assets to 29.3 percent, and NOW accounts jumped from zero to 2.7 percent of liabilities.

De novo associations (Table 4a) were chiefly responsible for these abrupt changes because their total loans, mortgage loans, liquid investments, and NOW accounts as of June 30, 1981 stood at 47.6 percent, 45.6 percent, and 41.9 percent of assets, and 3.7 percent of liabilities, respectively (see Table 4a).

The other ratios for Florida-chartered S&Ls exhibited sluggish movement: from June 1980 to June 1981, consumer loans inched up from 1.3 percent of assets to 1.9 percent; commercial loans crept up from zero to 0.2 percent; investment in service corporations increased from 0.4 percent to 0.6 percent; and NINOW accounts edged up from zero to 0.2 percent of total liabilities (see Table 4).

We measured the initial-year response for the nation's federal-chartered S&Ls by using data from June 1982 to June 1983, a year during most of which the expanded Garn-St Germain powers were available. Use of these data gives federal-chartered associations an advantage, because they already had over two years to plan how they would utilize broadened powers granted by DIDMCA. Even so, noteworthy expansions occurred only in liquidity, which rose from 10.2 percent of assets to 13 percent, and in NOW accounts, which climbed from 1.4 percent to 2.7 percent (Table 5). Declines were posted for total loans as a percent of assets, from 84.6 percent to 83 percent, and for mortgage loans, from 81.8 percent to 79.9 percent. Again, consumer and commercial loans grew meagerly. Of course, the large number of federally chartered S&Ls included in the calculations retard the movement of these ratios, since for many decades nearly all of these institutions (roughly 1,700) had been compiling portfolios consisting of long-term residential mortgages. Only the boldest use of new powers by the federal-chartered S&Ls could change the overall ratios substantially. It is clear, though, from the unique Florida experience that newly formed associations are apt to strive for high liquidity and to reduce the traditional predominance of mortgages in their loan portfolios dramatically. Thus far, it is equally clear that these newly formed associations have not sought to expand consumer and commercial loan holdings substantially despite their freedom.

The national experience for federal-chartered associations likewise indicates trends toward higher levels of liquidity, reduced holdings of mortgage loans, and slow expansion in consumer and, especially, commercial loans.

## Summary and Conclusions

This study suggests that the most pronounced balance sheet variation between state- and federal-chartered associations on a state-wide basis occurs when a large number of S&Ls choose to begin their existence as state-chartered organizations or convert to state charters. Their intent in pursuing a state charter is to take advantage of the expanded powers offered by state statutes; the Texas and Florida experiences support this supposition. The atypical evidence for Florida-chartered *de novo* associations, the vast majority of which came into existence after 1979, indicates that relatively unbridled *de novo* institutions sought high liquidity and markedly reduced holdings of mortgages, but expanded consumer and commercial loan portfolios very little. Generally, increased liquidity, decreased mortgage holdings, and slow expansion in consumer and commercial loan holdings were manifest for state- and federal-chartered S&Ls in Texas, Maine, and Florida, as well as nationally. Only Texas-chartered and Maine's state- and federal-chartered associations enlarged their consumer loan holdings significantly, to 7 percent and 5 percent of assets, respectively, by June 1983.

Overall, the nation's federal-chartered S&Ls as of June 1983 were comparatively more specialized in total loans and mortgage loans as a percent of assets; state-chartered associations held a relatively greater concentration in consumer loans, commercial loans, liquid investments, investment in service corporations, and NINOW accounts. No relative concentration

existed for NOW accounts. For the asset ratios most relevant to broadened powers (consumer loans, commercial loans, liquid investments, and investment in service corporations), neither group of S&Ls even approached the various limits imposed by state and federal laws. Their very measured responses were attributable in part to high start-up costs, sluggish macro-economic activity, lack of expertise, sharply diminished S&L earnings, and intense competition from other financial services entities. Managerial inertia likely was another major contributing factor.

In light of savings and loan associations' step-by-step approach to using liberalized powers, S&Ls as a group cannot yet be considered head-to-head competitors with commercial banks. Consequently, it does not appear justified at this time for regulators to consider savings and loan association market shares fully in weighing all merger applications. A substantial number of associations, however, are contending vigorously with commercial banks for consumer and commercial loans in various markets, and thus should be considered significant competitors for merger application purposes.

Additionally, this study implies that neither business nor individual consumers have yet benefited considerably—in terms of price, quantity, and quality of services offered—from the generally moderate increase in competition between S&Ls and commercial banks. The narrow use of new powers thus far leaves S&Ls seriously vulnerable to the real estate cycle. And finally, they probably will increase use of new powers to lessen interest-rate risk only at a slow pace because of built-in inertia and the current limited expertise of the thrift industry.

*(Sherley Wilson contributed valuable research assistance to this article.)*



## NOTES

<sup>1</sup>Beth M. Linnen and John N. Frank, "Managers' View," *Savings and Loan News* (April 1982), p. 36.

<sup>2</sup>For a discussion of how mergers and acquisitions that result in fewer financial institutions can lead to increased competition, see David D. Whitehead and Jan Luytjes, "Can Interstate Banking Increase Competitive Market Performance? An Empirical Test," *Economic Review* (Federal Reserve Bank of Atlanta), vol. 69 (January 1984), pp. 4-10. In this study, evidence was presented to support the hypothesis that increased links (meeting points) between competing firms that operate in geographically dispersed markets actually may stimulate competition. Whitehead and Luytjes stated that, in addition to the increased competition presumably fostered by increased links between multi-market firms in various markets, the lack of scale economies found in the banking industry can make even relatively small competitors influential in given markets. See George J. Benston, Gerald A. Hanweck, and David B. Humphrey, "Operating Costs in Commercial Banking," *Economic Review* (Federal Reserve Bank of Atlanta), vol. 67 (November 1982), pp. 6-21. The authors found that costs per account for banks larger than \$50 million in deposits increased as bank size increased, while costs declined with size for banks with less than \$25 million in deposits.

<sup>3</sup>In the 1963 Philadelphia National Bank-Girard Trust Corn Exchange Bank merger, the Supreme Court established commercial banking as an industry offering a unique product, a line of commerce separate and distinct from that produced by any other suppliers of financial services. In 1974, the Supreme Court remanded the Marine Bancorporation (Washington State) and Connecticut National Bank cases back to District Courts for further adjudication. The Court reaffirmed the single line of commerce rule and rejected the expansion of the line of commerce concept to include potential competition from savings and loan associations and mutual savings banks. More recently, District Courts in 1980 considered the impact of thrifts in cases involving commercial bank mergers. Merger of The First State Bank of Central Jersey and the First National Bank of South Jersey was approved and included banking alternatives, namely thrifts, in determining the resultant competitiveness of post-merger markets. The same rationale applied to the 1980 Utah merger of the Zions First National Bank and The First National Bank of Logan. See Douglas V. Austin, "The Legal and Legislative History of the Line of Commerce in Banking," *Economic Review* (Federal Reserve Bank of Atlanta), vol. 67 (April 1982), pp. 12-19.

The 1982 Garn-St Germain Act authorized emergency acquisitions of thrifts by commercial banks. See Garn-St Germain Depository Institutions Act of 1982; Public Law 97-320; Title 1; Sections 116, 123, and

141; October 15, 1982. Also see Constance Dunham, "Thrift Institutions and Commercial Bank Mergers," *New England Economic Review* (Federal Reserve Bank of Boston) (November/December 1982), pp. 45-62.

<sup>4</sup>For an explanation refer to SAS (Statistical Analysis System) Institute, Inc., *SAS User's Guide*, or Ronald L. Iman and W. J. Conover, *Modern Business Statistics* (New York, 1983), pp. 279-302.

<sup>5</sup>The 20 percent and 30 percent of total assets limitations apply to the aggregate of consumer loans, commercial paper, and corporate debt securities.

<sup>6</sup>The maximum 10 percent allowance under prudent loan rules applies to a combination of consumer and commercial loans. In 1981, the maximum percentage authorized for consumer loans made by Maine-chartered thrifts was 20 percent of total deposits, provided consumer and commercial loans combined do not exceed 40 percent of total deposits.

<sup>7</sup>The 20 percent and 30 percent of total assets limitations apply to the aggregate of consumer loans, commercial paper, and corporate debt securities.

<sup>8</sup>*Mortgage Loans* include FHA-VA mortgages, conventional mortgages, mortgage-backed securities, and mortgage participations. *Consumer Loans* include loans on savings accounts, home improvement loans, educational loans, automobile loans and other closed-end consumer loans, credit cards and other open-end consumer loans, and mobile home loans to consumers (retail mobile home loans). *Commercial Loans* include unsecured construction loans mobile home loans to dealers to finance inventory (wholesale mobile home loans); loans to business development corporations; loans for alteration, repair, or improvement of other than one-to-four unit residential property; chattel loans other than those reported as wholesale mobile home loans to commercial borrowers; loans secured by securities; and other miscellaneous loans.

<sup>9</sup>Total assets for Texas-chartered associations on June 30, 1980 were \$24.6 billion and for Maine-chartered S&Ls \$5.5 billion. Total assets for the nation's state-chartered associations were \$230.6 billion.

<sup>10</sup>Total assets on June 30, 1983 for Texas-chartered S&Ls were \$38.1 billion, for Maine-chartered institutions \$4 billion, and for Florida-chartered associations \$10.4 billion. The nation's total was \$270.1 billion.

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# What Distinguishes Larger and More Efficient Credit Unions?

William N. Cox and Pamela V. Whigham

An Atlanta Fed study shows that the most efficient of Georgia's 53 largest credit unions pass along benefits of their efficiency to the customer, rely less on service charge income, have a lower proportion of loans in their asset portfolios, and run twice as efficiently as the state's other big credit unions.



Credit unions are increasingly visible in the new fabric of the financial services industry. In years past the typical credit union, whose membership shared a common bond such as place of work or residence, was small, limited to passbook savings accounts and short-maturity consumer loans, and run by volunteers or part-time staffers from the sponsoring organization. But some credit unions today are loosening restraints on members and are becoming full-service financial institutions offering checking accounts, automatic teller machines, mortgage loans, savings certificates, retirement accounts, and even credit cards and safe deposit boxes.

Although full-service credit unions still tend to be small compared with community banks or with savings and loan associations moving into the community banking market, the new-style credit unions are often large enough to compete for business within the bounds of their membership groups. This transformation has been taking place for two reasons. First, deregulation, which has occurred in tandem with or even ahead of market changes in the financial services industry, has been the principal reason for credit unions' new energy and aggressiveness. With the relaxation of many of their regulatory limitations, credit unions today can offer checking accounts (share drafts), longer-maturity loans, and other products demanded by full-service customers.

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Second, the new breed of credit union manager who has pushed for deregulation tends to be younger, to have formal training in finance or economics, and to view the job in the same way as the manager of a bank or S&L branch. Some, in fact, come from a bank branch management background. They see themselves as professionals whose job is to help their institutions grow and extend additional services to customers. Because increased compensation for the manager often is constrained by regulations that limit credit union growth, this more aggressive group of executives has pushed for regulatory relaxation, to satisfy both their own demands and those of their members.

Most of the nation's roughly 20,000 credit unions still fit the traditional mold, but the non-traditional credit unions are the ones setting the pace, trying to become full-fledged participants in the retail side of the financial services industry. Looking at the 53 largest credit unions among the 435 total in Georgia, we applied an analysis of operating ratios to see how the larger credit unions in the group differ from their smaller counterparts, and how the profiles of the most efficient institutions in the group compare with the rest.

Although this study parallels some of the work on "high-performance banks" in the finance literature, it differs in an important respect: at credit unions, "profitability" has no clear meaning. We can measure retained earnings as a percentage of assets or income, just as with a bank or stock S&L. But many credit unions, even the larger ones, routinely transfer a substantial portion of earnings back to depositors in interest on share deposits. At numerous credit unions, in fact, interest payments are still called "dividends." In cases where earnings are paid back to depositors, only enough income typically is retained to keep growth in the capital base commensurate with growth in assets. Profitability, for such reasons, cannot be measured meaningfully.

Even though there is no way to profile "high-profitability" credit unions, we profiled the larger and the more efficient institutions to see what else sets them apart. The results show that larger credit unions have lower loan/asset ratios, less loan delinquency, and (not surprisingly) a higher proportion of share-draft deposits. More efficient credit unions have lower loan/asset ratios, charge lower loan rates and pay higher rates on most savings instruments; they rely

less on service charge income and have a higher proportion of regular share accounts.

## Methodology

Data for the study came from December 1983 Reports of Condition supplied to the Georgia Department of Banking and the regional office of the National Credit Union Administration by state- and federally-chartered credit unions, respectively. The ratios, defined in Appendix A, were derived from data on the 53 largest credit unions in Georgia.

We analyzed the ratios with a microcomputer database management program, which was used to identify the 13 largest credit unions and the 13 with the greatest efficiency. Efficiency was defined as a low ratio of operating expenses (noninterest) to assets, and alternatively as a low ratio of operating expenses to income. The high-efficiency samples produced by the alternative definitions were identical.

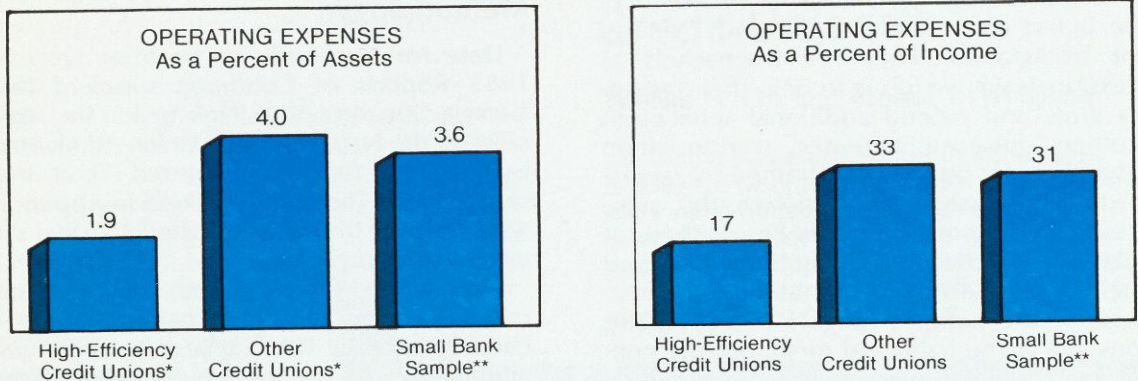
After identifying these two subsets, with 13 credit unions each, we compared their performance on other financial ratios to see if they differed significantly from the remaining 40 credit unions. The more efficient group of 13 credit unions, for example, showed an average loan/asset ratio of 59 percent, while the less efficient group of 40 showed an average loan/asset ratio of 68 percent. Analysis of this difference using standard statistical "t-tests" showed the difference to be significant at the 95 percent level.

We repeated this same process through a list of financial operating ratios to see how the financial profiles of the more efficient credit unions differed from their less efficient peers', and how the financial profiles of the larger credit unions differed from their smaller peers'.

## The High-Efficiency Profile

Since profitability has no meaning in the world of credit unions, we chose efficiency in conducting operations as the best measure of performance for our sample of Georgia's 53 largest credit unions. On the average, the 13 more efficient credit unions are twice as efficient as the others (Chart 1). Measured by the ratio of operating expense over assets, the high-efficiency group averaged 1.9 percent; their less efficient counterparts averaged 4 percent.

**Chart 1. Credit Unions in the High-Efficiency Group Are Twice as Efficient as Other Credit Unions or Typical Commercial Banks.**



\*The difference between high-efficiency credit unions and other credit unions is significant at the 95% confidence level.  
 \*\*Based on 1983 Federal Reserve Functional Cost Analysis of small banks.

Operating expenses averaged only 17 percent of income in the high-efficiency group, compared with a 33 percent average at the other credit unions.

When it comes to efficiency, Georgia's larger credit unions also hold their own against commercial banks. Consider the Federal Reserve's 1983 Functional Cost Analysis Report for commercial banks under \$50 million in total deposits. The 169 banks in that sample showed an average ratio of operating expenses to assets of 3.6 percent, and an average ratio of operating expenses to income of 31 percent. In each case, these figures are almost equal to the averages for the 40 less-efficient credit unions in our sample. That indicates the high-efficiency credit unions are efficient not just in relation to the other large credit unions in Georgia, but also to their cousins in the commercial banking industry.

The 13 more efficient credit unions are twice as efficient as the others in the two most significant categories of noninterest expense as well. On personnel expenses (including fringe benefits) the high-efficiency group averaged 8 percent of income, while the others averaged 15 percent; on office and occupancy expenses the respective averages were 3 percent and 6 percent. The "twice as efficient" rule also held for both categories of noninterest expense when each was measured as a percent of assets. In addition, we found that personnel

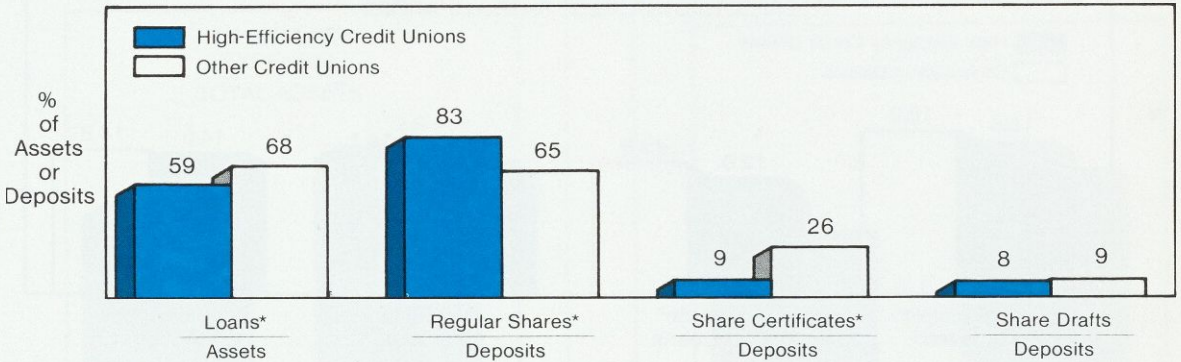
costs made up 46 percent of total operating costs for the more efficient group and 43 percent for the others, suggesting that credit unions follow the "half of noninterest expense goes to personnel" rule of thumb often applied to commercial banks.

How do efficient credit unions differ from their peers? Part of the reason for higher efficiency lies in the balance-sheet composition of the more efficient group (Chart 2). On the asset side, they count significantly fewer loans (which are more expensive to administer than investments) than their counterparts—59 percent of assets versus 68 percent. On the deposit side, we found a higher proportion of balances in regular shares (83 percent versus 65 percent) and a lower proportion of balances in certificates (9 percent versus 26 percent).

We found no significant difference in the proportion of balances in share-draft accounts, which are the most costly to administer. Transactions per share-draft account do not vary appreciably with the amount of balances in the account, and thus neither do the expenses involved in processing them. Possibly, the more efficient credit unions have fewer accounts but with higher average balances. However, with no information on average share-draft account balances at the credit unions in our sample, we were unable to investigate this possibility.

One other interesting difference between the high-efficiency group and the others emerged

**Chart 2.** High-Efficiency Credit Unions Show a Lower Proportion of Loan Assets, a Higher Proportion of Regular Share Deposits, and about the Same Proportion of Share-Draft Deposits.

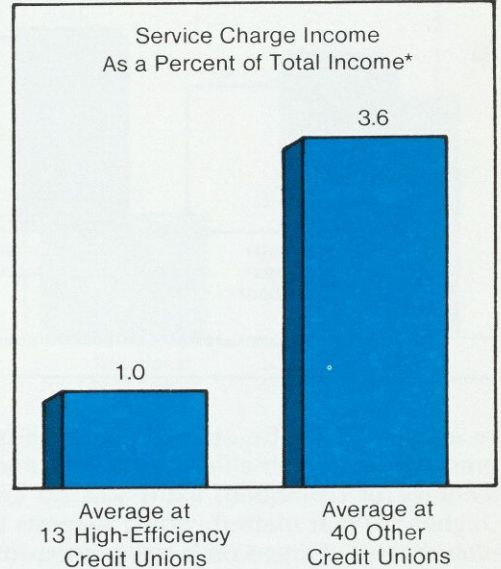


\*The difference is statistically significant at the 95% confidence level.

from our analysis: the more efficient group actually reported far less service charge income as a percent of total income than the others—1 percent versus 3.6 percent (Chart 3). Because many credit union managers are experimenting with service charge income as an important source of revenue, we expected the more aggressive and (presumably) more efficient credit unions to make greater use of this avenue. Apparently, the opposite is happening: credit unions in a squeeze because of lower efficiency are quicker to turn to service charges than their high-efficiency cousins. At Georgia's large credit unions, service charge income seemingly has represented a defensive reaction to offset expenses rather than an aggressive move to add income.

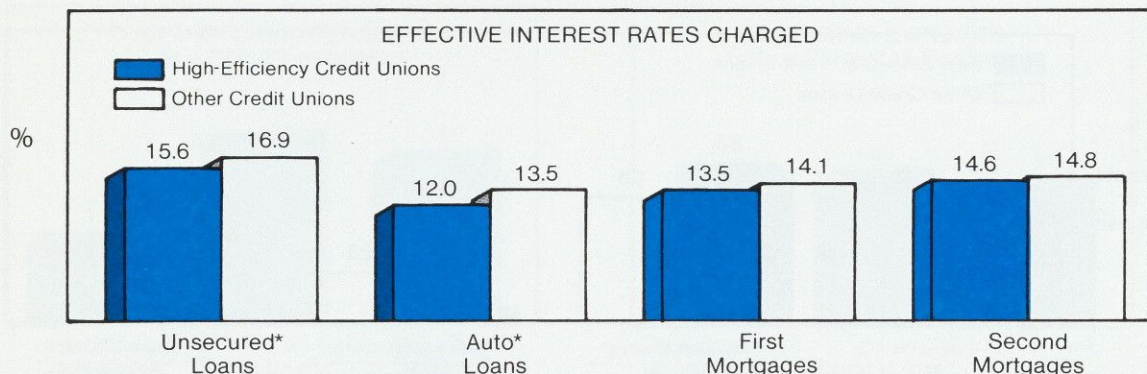
How do the efficient credit unions use their cost advantages? We found that they pass along the financial benefits of their efficiency both to borrowers and most depositors. On the loan side, the more efficient group charged lower interest rates across the board (Chart 4). On unsecured consumer loans, these institutions charged 15.6 percent, compared with a 16.9 percent average rate for their less efficient counterparts. On secured loans (mainly for automobiles), the more efficient credit unions charged an average of 12 percent, versus 13.5 percent for the others. The more efficient group also charged slightly lower rates on first and second mortgages, although the differences

**Chart 3.** High-Efficiency Credit Unions Rely Less on Service Charge Income.



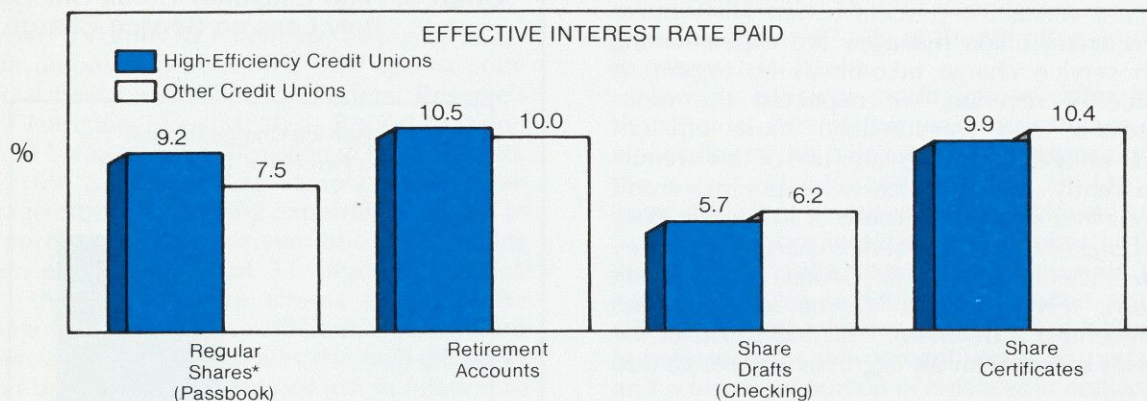
\*The difference is statistically significant at the 95% confidence level.

**Chart 4. High-Efficiency Credit Unions Charge Lower Loan Rates.**



\*The difference is statistically significant at the 95% confidence level.

**Chart 5. High-Efficiency Credit Unions Pay More Interest on Savings and Retirement Accounts, But Less on Share-Draft Checking Accounts and Share Certificates.**



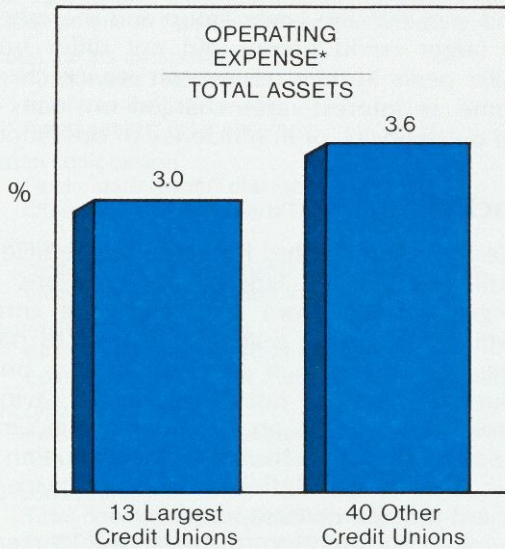
\*The difference is statistically significant at the 95% confidence level.

were too small to be statistically significant. Interestingly, the high-efficiency credit unions' percentage of delinquent loans was no lower (or higher, for that matter), which suggests that the lower rates charged on loans and the lower proportion of loans on the balance sheet probably did not result from tighter standards for granting loans.

The more efficient credit unions also shared some of the benefits of their efficiency with depositors, at least on regular share accounts

(passbook savings) and retirement accounts (Chart 5). On regular shares, where five-sixths of their deposit funds reside, the high-efficiency group paid an effective rate of 9.2 percent, versus an effective rate of 7.5 percent at the other credit unions. In each case, these figures include an unknown but unquestionably small proportion of money market-type accounts. The high-efficiency credit unions paid slightly more on retirement accounts and slightly less on share-draft checking accounts and share

**Chart 6. The Largest Credit Unions Are Neither More Nor Less Efficient.**



\*The difference is not statistically significant at the 95% confidence level.

certificates, but these differences were small and statistically insignificant.

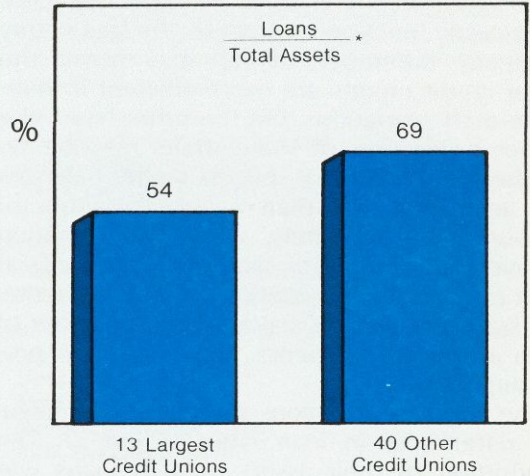
These findings—that high-efficiency credit unions pass the results of extra efficiency to their members in the form of lower loan rates and higher deposit rates—highlight the difficulty of measuring profitability at these institutions. The more efficient credit unions use their profits in this way rather than adding them to net worth. Ultimately, there was no difference in the ratio of retained earnings to assets between the high-efficiency group and the others.

### Size Profile

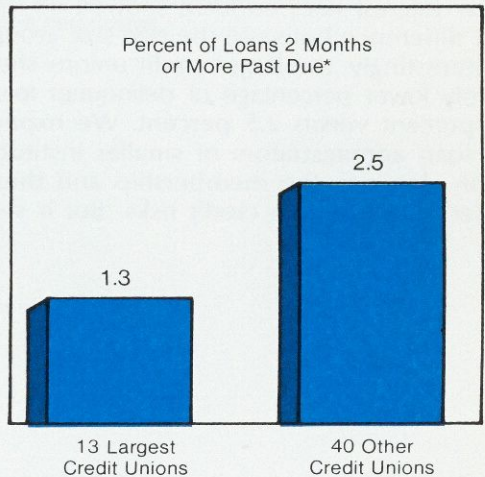
Georgia's 13 largest credit unions constitute a different group from its 13 most efficient. When we divided the state's 53 largest credit unions into the 13 largest and the remaining 40, we found the size differences were striking: the top 13 averaged \$88 million in assets; the other 40 averaged about \$9 million.

**Chart 7. Large Credit Unions Show . . .**

. . . a) Lower Loan Proportions



. . . and b) Lower Delinquency Rates.



\*The difference is statistically significant at the 95% confidence level.

It appears that the larger institutions are not necessarily more efficient. We found no significant difference in either the ratio of operating expense to assets (Chart 6) or the ratio of operating expense to income. This suggests that credit unions averaging \$9 million in assets have no advantage or disadvantage with respect

to their larger peers when it comes to efficiency. However, the larger credit unions may be more efficient on a transaction-for-transaction basis since they have a higher proportion of deposit funds in share-draft accounts: 10.4 percent versus 2.9 percent. With share drafts being the most costly function to process, the lack of any efficiency difference overall may mean the larger credit unions are more efficient in non-share-draft operations. On the other hand, the higher proportion of share drafts may be no costlier to process if it reflects higher balances per account rather than a larger number of accounts. Unfortunately, without information on average balances of share-draft accounts at each credit union, we cannot determine whether the larger institutions have a larger number of such accounts and hence higher costs in processing them.

The larger credit unions showed some intriguing differences in loan ratios (Chart 7). The proportion of their assets held in loans was significantly lower—54 percent versus 69 percent—which may reflect a saturation of the membership eligible to borrow from the credit union. Interest rates on loans showed no significant difference between the two size groups.

Interestingly, the larger credit unions show a sharply lower percentage of delinquent loans—1.3 percent versus 2.5 percent. We expected the loan administrators of smaller institutions to be closer to the membership and thereby better able to judge credit risks. But it seems

that the reverse may be true: larger credit unions apparently are able to administer their loans more professionally with a lower degree of delinquency.

These are the only significant differences we found between the larger group and the others. The larger credit unions did not differ from smaller peers in their reliance on service charge income, in interest rates charged on loans or paid on deposits, or in efficiency of operations.

## Conclusion

We have investigated how the most efficient quartile of the 53 largest credit unions in Georgia differed from the remaining three quartiles. We found that they appear to pass along the benefits of their efficiency both through lower loan rates and higher savings interest; they rely less on service charge income; their asset portfolios have a lower proportion of loans; and, by our definition, they are twice as efficient as their contemporaries.

Turning our attention to the largest 13 credit unions among the 53, we found that size seems to bring less in the way of distinctions than does efficiency. The larger credit unions appear neither more nor less efficient. They have lower delinquency rates, a lower proportion of loans, and a higher proportion of share-draft deposits. Otherwise, there seem to be few financial differences between the largest institutions and the others.



## APPENDIX

Variables considered in examining the performance of the largest and most efficient among the 53 largest credit unions in Georgia are outlined below.

### Total assets composition

- Total loans/Total assets
- Investments/Total assets
- Fixed assets/Total assets

### Loan composition

- Real estate loans/Total loans
- Other loans to members/Total loans

### Return on assets

- Income from investments/Total investments
- Income from loans/Total loans

### Loan delinquency rates

- All delinquent loans/Total loans
- Loans delinquent less than 12 months/Total loans

### Income composition

- Interest income/Gross income
- Fee income/Gross income

### Expense ratios

- Total operating expenses/Total assets
- Total operating expenses/Gross income
- Personnel expenses/Total assets
- Personnel expenses/Gross income
- Office occupancy expenses/Total assets
- Office occupancy expenses/Gross income

- Educational and promotional expenses/Total assets
- Educational and promotional expenses/Gross income

- Personnel expenses/Total operating expenses
- Office occupancy expenses/Total operating expenses
- Educational and promotional expenses/Total operating expenses

### Deposit composition

- Regular shares/Total deposits
- Share drafts/Total deposits
- Share certificates/Total deposits
- IRAs/Total deposits

### "Profitability" ratios

- Retained earnings/Total assets
- Retained earnings/Gross income

### Loan interest rates offered during the last week of December 1983

- Unsecured loans
- New vehicle loans
- Second mortgage loans
- First mortgage loans

### Dividend rates offered during the last week of December 1983

- Regular shares
- Share drafts
- IRA/KEOGH retirement accounts
- Share certificates

The Banking Act of 1933, aimed at protecting commercial banks, imposed two constraints on their ability to pay interest. The act prohibited interest payments on demand deposits and authorized the Federal Reserve to impose ceilings on time and savings deposit interest. Savings and loan deposits were covered by interest ceilings in 1966. Beginning in 1980 with the Depository Institutions Deregulation and Monetary Control Act, many constraints on interest payments on time and savings deposits have been lifted, and the process will continue in stages through 1986. Today, explicit interest is paid on non-corporate NOW (negotiable order of withdrawal) accounts at the Regulation Q passbook rate and Super-NOW accounts at unregulated rates, even though these accounts are indistinguishable by the customer from demand deposits. Congress is considering removing the prohibition on all demand deposit accounts.

Many economists and bankers believe that interest controls on deposit accounts have been detrimental both to depositors and to the depository institutions they were designed to aid. Furthermore, they believe the controls, particularly the prohibition of interest on demand deposits, have made it more difficult to conduct monetary policy. If their view is correct, the remaining constraints should be removed—and the sooner the better. But an alternative view holds that constraints on deposit interest payments may be necessary to prevent, or at least delay, destructive competition for funds. Those who want the remaining controls continued, and the old controls reimposed and extended to other institutions offering third-party transfers (such as brokers' cash management accounts), believe competition for funds results in burgeoning expenses for depository institutions and overly risky investments by banks seeking to cover these expenses. Lifting the prohibition would mean, they fear, a return to the bank failures of the 1920s and 1930s. If their prediction is valid, the movement toward deregulation should be halted or reversed.

The following analysis attempts to determine which alternative is correct

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## Interest on Deposits and the Survival of Chartered Depository Institutions

George J. Benston

Demand deposit interest payments should be reinstated, according to a scholar who argues that a new market-related ceiling would discourage fraud and would enhance the comparative advantages of depository institutions.



and what specific measures should be taken. The situations that led to deposit interest controls in the 1930s and 1960s are described first and empirical evidence presented. Next, the effect of the controls and reaction to them by financial institutions and their customers will be delineated. Finally, I will spell out the present costs and benefits of the legal constraints, as well as consider those to whom they apply. Unless specified otherwise, the term "banks" is used throughout to denote thrift institutions as well as commercial banks.

This analysis leads strongly to two conclusions. First, if the constraints are left in place, they are likely to be costly to financial institutions, their customers, and the general public. Second, because of the moral hazard inherent in deposit insurance, an interest rate ceiling on demand deposits should be imposed that is somewhat below but tied to a market rate.

## Interest Payments on Demand Deposits

Before the Banking Act of 1933 was voted into law, banks paid interest on the relatively large demand deposit balances held by individuals, businesses, and other banks. Then, as now, depositors were paid indirectly for their deposits, principally with such "free" services as check processing, deposit collection, and preferable lending arrangements. But explicit interest also was paid when these means were insufficient in the competition for deposits. Thus, banks in larger cities tended to pay interest on deposits while those in smaller cities and rural areas competed less vigorously.<sup>1</sup> In particular, money-center banks, especially those in New York City and Chicago, bid for the deposits of country banks when the latter sought temporary investments for their depositors' seasonally fluctuating funds. Not surprisingly, the money-center banks would have preferred not to compete against each other. The New York Clearing House agreed at various times to a maximum rate, but some banks yielded to temptation and the cartel agreements were broken often.<sup>2</sup>

Two arguments have been used to justify the Banking Act of 1933's prohibition of interest payments on demand deposits. One is that interest payments resulted from destructive competition among banks. An overly ambitious or risk-preferring banker, the argument goes, seeks to gain deposits by offering relatively high interest

rates. Competitors must follow this lead or forfeit customers. Bankers who pay higher interest rates are forced to compensate by investing in riskier assets that provide greater gross revenues but eventually result in greater losses. Bankers who refuse to follow the leader lose deposits, which weakens their banks. The consequence, it is claimed, is bank failures. In fact, some 600 banks failed each year in the decade of the 1920s, and more than 9,000 banks were closed from 1930 through 1933.

The second argument was emphasized by Senator Carter Glass, the principal author of the Banking Act of 1933. He contended that the interest offered by the money-center banks to their country cousins drained funds from the rural areas to the large cities. Worse yet, the money-center banks were said to have invested these funds in high-rate brokers' loans, which allegedly helped fuel the 1920s' speculative stock market boom that triggered the subsequent crash and depression.<sup>3</sup>

The evidence is inconsistent with both these arguments in three principal regards: (1) there was no positive relationship between interest payments, risk-taking, and bank failures; (2) the pre-1933 bank failures appear to have resulted from factors other than interest payments on deposits; and (3) money-center banks did not "drain" the country areas of funds.

First, banks that paid interest on demand deposits tended not to invest in riskier assets.<sup>4</sup> Indeed, data from the 1920s, when interest was paid, reveal that interest payments on deposits were unrelated to the banks' investments in risky assets, such as loans rather than bonds and corporate bonds rather than U.S. government obligations. Nor were losses on loans associated with interest payments. Furthermore, banks in the larger cities tended to pay higher rates on deposits while earning lower yields on loans, as compared with banks in smaller cities and country banks that paid less on deposits while earning higher rates on their loans. These data show that interest paid on deposits reflected market conditions rather than risk-taking. Indeed, when the banks' expenditures for salaries and other variable operating expenses are compared with their interest payments, a one-to-one substitution is found: on average, a bank that paid a dollar more in interest incurred about a dollar less in other expenses. Importantly, the early 1930s' failure rates of national banks that paid more interest on deposits were lower than the failure rates of

those that incurred less interest expense, perhaps because banks faced with sharply reduced revenues could reduce interest payments faster than those that compensated their customers with services.

Second, with respect to bank failures (or "suspensions," as they were once called), two periods should be distinguished. The decade 1920 through 1929 is roughly comparable to the present period, since its suspensions were attributable more to banking practices and local economic conditions than to macroeconomic events and public policies. Furthermore, while the 1920s' suspension rate of approximately 600 banks annually now would be considered a major crisis, at the time it was of equivalent or less concern than is today's much lower level of failures. The Great Depression years of 1930 through 1933, however, saw a third of the nation's banks closed, a debacle that seems highly unlikely to recur.

It appears that the suspensions of the 1920s were due primarily to economic distress in specific areas of the country coupled with unit banking, which severely constrained banks from diversifying their portfolios and deposits. In particular, over the years 1920 through 1929, fully 47 percent of the suspended banks were located in the western grain states, 18 percent in the Southeast, and 11 percent in the southwestern cotton states—a total of 76 percent.<sup>5</sup> The suspended banks represented 28 percent of the banks in operation in the western grain states in 1920, 35 percent of those in the Southeast, and 19 percent of those in the southwestern states. For the United States as a whole, suspended banks represented 19 percent of the total.<sup>6</sup> Most of the suspended banks were small and located in small towns; 43 percent had earning assets of less than \$150,000 and 85 percent had less than \$500,000; 35 percent were in towns with under 500 residents, and 73 percent in towns with a population less than 2,500. In each period, few of the suspended banks operated branches: of the 8,716 suspensions from 1921 through 1931, only seven had more than ten branches, and only three of these operated branches outside the head office city.

Over the years 1930-31, fully 3,505 banks were suspended. Of these, 31 percent were in the western grain states, and 15 and 10 percent in the southeastern and southwestern cotton states, for a total of 56 percent. These suspensions represented 18 percent, 31 percent, and 14

percent, respectively, of the number in operation on June 30, 1930. During these years the relative number of banks suspended in other areas of the country increased dramatically over the low rates that prevailed during the 1920s, ranging from 6 percent of the New England banks in 1930 to 17 percent of the North Central banks. For the United States as a whole, suspended banks accounted for 15 percent of all banks. Thus the Great Depression, which was attributable primarily to the 25 percent decrease of the money supply (demand and time deposits) from March 1929 through March 1933, differed from the 1920s in having failures distributed across the nation.<sup>7</sup>

The third argument against the prohibition of interest on demand deposits concerns the alleged "drain" on country bank funds. A study by Brian C. Gendreau (1979) of the relationship between country banks' balances with other (largely city) banks and the changes in their deposits less loans (free funds) over the years 1919-1933 revealed that only about 46 percent of the change in their free funds was invested in bankers' balances; the amounts were somewhat lower where the country banks held relatively more government securities.<sup>8</sup> These data suggest that the country banks first served local demands and then either invested their surplus deposits through the city banks or in the then limited supply of government securities. Charles M. Linke also points out that the money-center banks acted "as direct agents in the making of security loans for interior banks and nonbank lenders."<sup>9</sup>

Thus the evidence fails to support the claim that interest payments on demand deposits resulted in unsafe investments by banks; in the inappropriate flow of funds away from smaller cities and rural areas into the money centers; or in the bank failures of the 1920s and 1930s. Rather, interest often was a desirable means for banks to pay their customers (including country banks) for funds. Furthermore, the reasons cited here do not appear to be those that principally motivated the prohibition of interest on demand deposits. As Linke (1966) reports, there was little discussion of demand deposit interest, except for Senator Glass' concerns for the flow of funds from country to money-center banks. Rather, the prohibition was a *quid pro quo* offered to large commercial banks in exchange for their acceptance of FDIC insurance, which benefited small banks but was paid for primarily by large banks.<sup>10</sup>

## Interest Payments on Time Deposits

**The Pre-1933 Experience.** Early concern over interest payments on time deposits was expressed chiefly in connection with deposit insurance. The eight states that adopted deposit guarantee programs during 1908-1917 legislated statutory limits on interest rates, on the expressed assumption that the insurance program "would encourage reckless banking because depositors would seek the bank with the most liberal terms rather than the safest bank."<sup>11</sup> Bankers who demanded interest rate controls asserted that soundly managed banks would be at a competitive disadvantage without them.

During the 1920s bankers often competed by offering higher interest rates on time deposits. Concomitantly, other bankers called for voluntary and government-mandated constraints. From the passage of the 1927 McFadden Act, which among other things permitted states to regulate the interest payments of nationally-chartered as well as state-chartered banks, until the Banking Act of 1933 was enacted, 12 states adopted interest rate ceilings. Controls were extended nationally, first to member banks by the 1933 act, which vested authority in the Federal Reserve Board, and then to nonmember insured banks by the Banking Act of 1935, which vested authority in the Federal Deposit Insurance Corporation. (The FDIC's Regulation IV is almost identical to the Federal Reserve's Regulation Q.)

Thus federal controls on interest rates paid on time and savings deposits seemingly were motivated by deposit insurance, and were primarily a means to limit competition among banks. Unlike demand deposits, time and savings deposits are not a monopoly product of commercial banks. Therefore, commercial banks would have been at a serious competitive disadvantage had a zero ceiling or much less than market ceiling on them been imposed.

**The 1960s' Experience.** Until 1965 the Reg Q ceiling remained above the rates that commercial banks were willing to pay for time and savings deposits. In that year inflation drove market rates above the ceiling and banks lost funds as the public shifted to higher yielding unregulated investments, such as treasury bills and commercial paper, and to thrifts (savings and loan associations and mutual savings banks) as they increased their rates. As a "temporary" measure to protect thrifts from competition

among themselves, which would have increased interest expense, and to relieve commercial banks from competition by the thrifts, Congress enacted the Interest Rate Adjustment Act of 1966. It extended deposit rate ceilings to cover all federally-insured savings and time deposits except those at credit unions. As interest rates continued at high levels, the temporary ceiling became permanent. The Depository Institutions Deregulation and Monetary Control Act of 1980 prescribed an "orderly phase-out and the ultimate elimination of the maximum rate of interest and dividends" over six years, during which time authority to determine the ceilings was transferred to the Depository Institutions Deregulation Committee (Title II, Section 202). In deciding the extent of decontrol, the committee was charged to exercise due regard for "[t]he safety and soundness of depository institutions" (Title II, Section 204).

While the charge to the deregulation committee gives the appearance that ceilings on savings and time deposits (and later on NOW accounts) were imposed to prevent the failure of depository institutions, such was only tangentially the case. The initial imposition of Regulation Q in 1933 was set too high to be effective, which is inconsistent with the belief that the ceiling was supposed to prevent banks from engaging in "destructive competition." The extension of the ceiling to thrifts in 1966 came at a time when there was little danger of their failing. However, the higher interest payments they would have had to offer depositors would have increased their costs, a result that was believed to be detrimental to the housing industry. Hence, though the imposition of savings and time deposit interest rate ceilings did help the thrifts—at the expense of their depositors, who failed to receive the benefits of competition—it was not accompanied by changes in the regulations that determined the composition of their assets and liabilities. Thrifts still were required to, or were subsidized to, invest primarily in long-term assets (mortgages) while holding short-term liabilities (savings). Thus, though the extension of Reg Q gave thrifts respite from higher market interest rates, it failed to solve the underlying problem: thrifts could not offer services demanded by their customers (checking accounts and consumer loans) or structure their portfolios so as to reduce the risk of unexpected changes in interest rates.

And it is this same vulnerability that creates financial trouble for many thrifts today.

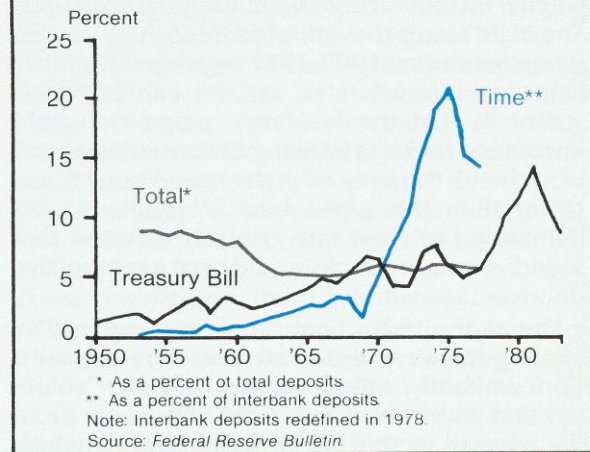
## Effects of Deposit Interest Rate Controls

**Bankers' Balances.** Initially, a government-mandated prohibition of payment for a resource benefits those to whom the resource must be sold. In this instance the resource is demand deposits and the benefit goes to commercial banks. As noted above, savings to money-center banks of interest that would have been paid, particularly on bankers' balances, almost exactly equaled the amount those banks paid for FDIC insurance on smaller banks' deposits.

However, given the very low market rates of interest that prevailed until the 1950s, it is likely that correspondent banks easily could have compensated the respondents for their balances with services. Indeed, it is doubtful that the money-center banks could maintain a cartel against the country banks even with the aid of law. Nothing prevents a smaller bank from using many correspondents, and such appears to be the case. For example, a study by Robert J. Lawrence and Duane Lougee (1970) indicated that the average \$10 million asset bank in the Denver Federal Reserve Zone had three correspondents and the average \$40 million asset bank had nine to ten correspondents. Robert E. Knight's (1976) survey of correspondent banking in the Kansas City Federal Reserve District found that the average bank with less than \$5 million in deposits had five correspondents, with the number increasing for larger banks (for example, 13 for banks with \$50 to \$100 million in deposits, and 31 for banks with \$100 million or more). Furthermore, in the 1970s Federal Reserve member banks could use the then free services of the System. In addition, the increasing government debt after 1933 offered country banks an alternative liquid investment. Consequently, correspondent banks compensated their respondents with a plethora of services, including acting as brokers for the respondents' funds via loan participations and transactions in government securities.<sup>12</sup>

Nevertheless, as market interest rates rose it became increasingly difficult for correspondent banks to compensate their respondents for balances. This problem is reflected in the data, depicted in Chart 1, which shows a decreasing percentage of interbank deposits to total deposits. Additionally, the percentage of interbank deposits classified as time deposits has increased; and the

Chart 1. Interbank Deposits and Treasury Bill Rates



amount of federal funds lending among banks has increased dramatically. Thus the correspondent banks are paying for deposits of correspondent banks with services and interest, but they have been unable to maintain their pre-1933 proportion of bankers' demand balances.

**Business Demand Deposits.** Checking is an efficient means of paying bills while maintaining control over cash receipts and disbursements. Since commercial banks until recently enjoyed a monopoly over this service, it might appear that a legally enforced prohibition against paying demand deposit interest would benefit banks and hurt business depositors. But many banks could profit from attracting business deposit balances. As means of competing for these deposits, they have alternatives to explicit interest payments, among which are "free" banking services, loan commitments, and lower interest on loans. Indeed, even when banks were permitted to pay interest on demand deposits, depositors with smaller balances were compensated with services.

At least two banking practices can be traced to the prohibition of interest on business demand deposits. One is the practice of requiring compensating balances; that is, customers who are granted a line of credit must keep a specified percentage on deposit at the bank. Several writers (such as Jack Guttentag and Richard G. Davis, 1961) have shown that, if the compensating balances were funds that the customer would not have kept on deposit except for the requirement, both the

bank and the customer would be better off if additional interest or a fee was substituted for the funds. This conclusion is reasonable because the bank must hold part of the compensating balance in non-interest-bearing reserves, and so the customer gives up more than the bank can lend. As David W. Mullins, Jr. (1976) and others have shown, however, the compensating balance requirement may be rational if the customer would have kept the funds at the bank either to pay for services rendered or in response to an explicit payment. One such payment is a contract to borrow funds at the customer's option, perhaps at a favorable rate, in the form of a guaranteed line of credit. The compensating balance requirement, then, is a means by which the bank can enforce this contract. Surveys of compensating balance requirements confirm that the practice may be logical, since they show the following: (1) the requirements are most commonly used with large, national firms that have accounts in many banks, for these firms could readily transfer funds in the absence of an agreement; (2) the requirements are stated in terms of average demand deposits, which imposes no burden on a firm that would otherwise maintain working balances; (3) they tend to be negotiated rather than set uniformly; and (4) the compensating balance requirements are enforced more strictly when interest rates are high.<sup>13</sup> Furthermore, compensating balance requirements were rarely used prior to the prohibition of interest payments on demand deposits.

The prime rate convention is the second practice that appears to owe its existence to the Banking Act of 1933. Murray E. Polakoff and Morris Budin (1973) state that the prime rate was not introduced until 1934. They ascribe its emergence to the then current belief that "economic recovery lay in the fixing and maintenance of minimum prices," as exemplified by the National Industrial Recovery Act of 1933.<sup>14</sup> The rate was set at 1.5 percent until 1947, after which it fluctuated in steps that roughly followed market rate changes. The steps were announced by one of the money-center banks until 1971, when the First National City Bank of New York (now Citibank) introduced the floating prime. Though the rate has been described as that obtained by a bank's most creditworthy customers, Polakoff and Budin clearly are correct in identifying it as a cartel-like minimum price. However, other than pointing to contemporaneous price-fixing arrangements, they do not consider why the prime came into existence

in 1934 rather than before or why it lasted so long after the Depression. My study suggests that the legal prohibition of interest on demand deposits was the reason the rate developed and persisted. Even for many years after the Depression, the "best" customers had limited alternatives to the relatively few large banks that could meet their borrowing and fund transfer requirements. For these customers the large banks established a minimum loan rate, the prime, to restrict competition among themselves and take advantage of the prohibition of interest on demand deposits. Warren T. Trepata (1981) documents that as rates on alternative uses of funds increased, the banks' customers and others found it worthwhile to develop alternatives that eventually eroded the prime rate's benefit to banks.

Commercial paper is one important alternative to bank loans. While this avenue for funds existed before 1933, its growth seems to owe much to the prohibition against interest on demand deposits. Without a constraint on banks' ability to pay for deposits, and without a tax on deposited funds in the form of non-interest-bearing required reserves, there is little reason for companies to borrow through commercial paper or for investors to purchase these obligations rather than hold deposits. Banks offer borrowers economies of scale and scope in the processing of information that investors demand. Although investors' information-processing costs are low for well-known companies with little default risk, investors experience no disadvantage from using banks' services unless banks are unwilling or unable to price these services competitively. The prime rate represents an effort by banks at noncompetitive pricing. However, as long as the prime is close to the rate that borrowers would have to pay on commercial paper, the banks can keep most of their customers.

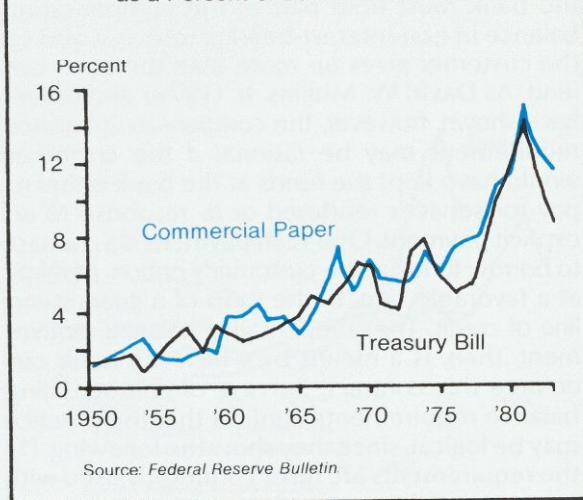
In fact, Polakoff and Budin show prime rates being above the four- to six-month commercial paper rate by about 50 basis points (hundredths of a percent) from 1947 through 1960, during which period the prime rose from about 2 to 5 percent. Until 1960 virtually no nonfinancial company commercial paper was outstanding, perhaps because the 50 basis point spread between the commercial paper rate and the prime lending rate was insufficient to offset the large companies' transactions costs of informing potential investors of their risks.<sup>15</sup> Finance companies, on the other hand, could avail themselves of lower-cost borrowing because the safety of their

assets—portfolios consisting of many loans with a consistent and verifiable record of repayment—could be communicated readily to investors. From 1960 through 1965 the spread widened as the prime was unchanged at 4.5 percent while the commercial paper and U.S. Treasury three-month bill rates declined. The spread was about 150 basis points in 1961. Over this period, nonfinancial corporations increasingly floated commercial paper. Thereafter, outstandings increased almost exponentially, even though the spread between the prime and the commercial paper rates narrowed, until by 1966 and through June 1977 it was close to zero. After that date, the spread widened to between 125 and 150 basis points.

This pattern can be explained by considering the opportunity cost of funds (as measured by the U.S. Treasury three-month bill rate) together with information costs to borrowers and investors. The considerably increased spread in 1961 was paralleled by a 224 basis point reduction in the treasury bill rate from December 1960 to December 1961. Until about 1968 the bill rate was below 5 percent. At that level, banks are able to offer large depositors services that compensate them for their deposits. Additionally, the tax on non-interest-bearing reserves is not so great as to put banks at a serious competitive disadvantage with alternative investments. Hence, while there may have been a demand by borrowers for funds via commercial paper, the additional yield to investors from moving their funds from bank deposits apparently was insufficient to reward them for learning about commercial paper. This may explain why there was little relationship between the bill rate and the ratio of commercial paper to bank loans.<sup>16</sup> The commercial paper to bank loans ratio increased after 1968 when the opportunity value of funds had increased beyond the level where banks could sufficiently compensate depositors with non-interest rewards. From that point, as Chart 2 indicates, when much of the information cost about nonfinancial commercial paper became a “sunk” or irreversible cost, until the present, the relative amount of commercial paper appears to be a function primarily of the opportunity value of funds.<sup>17</sup>

Banks’ legal inability to compensate depositors sufficiently has inspired a number of other alternatives. These include the growing use of bankers’ acceptances that are not held by the accepting bank. In effect, the bank takes a

**Chart 2.** Commercial Paper of Nonfinancial Corporations as a Percent of Banks’ Business Loans

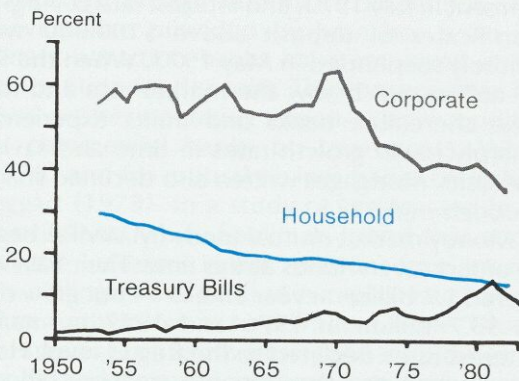


deposit and makes a loan, but does not book either, thereby avoiding reserve requirements and interest-rate controls.<sup>18</sup> Bankers also are serving increasingly as brokers for direct placement loans and commercial paper. These activities have been challenged by investment bankers, who charge that commercial banks are violating the Glass-Steagall provisions of the Banking Act of 1933 that mandate separation of commercial and investment banking. Security brokers, however, have offered their services to corporations in lending and investment activities that banks would have handled, were it not for the legal constraints of deposit interest prohibition and required reserves. Not surprisingly, as the opportunity value of funds has increased, these activities have likewise. Moreover, they have been enhanced by steady reductions in transactions costs as computer technology has continued to improve.

These extensive cash management activities of corporate depositors are perhaps the most important consequence of banks’ inability to compensate depositors for the opportunity value of their funds. Evidence of this familiar phenomenon is the percentage of corporate liquid assets (demand deposits, currency, time deposits, U.S. government securities, short-term municipal securities, and other open market paper) held in the form of demand deposits. This ratio has decreased from 54.4 percent in 1953 to 34.9 percent in 1982 (see Chart 3)..



**Chart 3. Cash Balances as a Percent of Liquid Assets and Treasury Bill Rates**



Source: Bill rate: *Federal Reserve Bulletin*. Cash balances: *Federal Reserve, Flow of Funds; Sector Statements of Assets and Liabilities*.

**Household Demand Deposits.** Before 1933 banks generally did not pay interest on demand deposits. Thus it is doubtful that they would have paid interest on the demand deposits of households until the market value of funds reached the levels of the late 1970s. Ironically, banks can pay interest on household checking accounts by labeling them as savings accounts subject to negotiable orders of withdrawal (NOW). This innovation was created by a savings banker as a means of offering check services to consumers, since only commercial banks could accept demand deposits. Though the concept was initially disapproved, the adverse ruling was overturned by the Massachusetts Supreme Court in 1972. Federal legislation limited NOW accounts to the New England states, New York, and New Jersey until the Depository Institutions Deregulation and Monetary Control Act of 1980 extended authority to issue NOWs to all depository institutions.<sup>19</sup> The Garn-St Germain Depository Institutions Act of 1982 permits banks and thrifts to offer money market deposit accounts (MMDAs) that pay depositors an unregulated interest rate on balances over \$2,500, but limits transfers to six a month. Super-NOW accounts, authorized in January 1983, allow depositors to write as many checks as they wish, but require reserves, which reduces the interest depository institutions are willing to offer. These accounts can be offered only to nonbusiness consumers.<sup>20</sup>

Since interest on household demand deposits essentially is not controlled, banks' experience with them can indicate the probable effect of allowing interest payments on other demand deposits. Indeed, that experience is likely to overstate the adverse effect of decontrol on banks' net profits, since households have fewer means of obtaining market interest rates on transactions balances than do corporations. Those who opposed payment of interest on checking accounts feared that bank profits would suffer and that thrifts would have to raise mortgage rates to compensate for higher expenses. The many studies of "the NOW experience" show that profits initially declined somewhat, but not nearly enough to threaten the institutions' existence.<sup>21</sup> Indeed, the profit reductions are better characterized as market entry costs than as losses. Those institutions offering NOW accounts also experienced significantly greater deposit and asset growth than did comparable institutions not offering such accounts, and the thrifts increased their mortgage loans outstanding.<sup>22</sup>

Furthermore, it appears that the interest-bearing NOW accounts are no more costly to banks than regular checking or savings accounts. Herb Taylor (1984) used the Federal Reserve's Functional Cost Analysis Program data for member banks nationwide for the years 1976 through 1982 to estimate the average rates of return paid on household NOW, regular checking, and savings accounts. He included implicit interest, in the form of the expense of services less service charges, plus explicit interest paid on NOW and savings accounts. The calculated total return for the seven years averaged 6.89 percent for NOW accounts, 5.42 percent for regular checking accounts, and 6.75 percent for savings accounts. Although the NOW and regular checking accounts have about the same activity and hence about the same operating cost per account, Taylor's analysis found the average balance of the NOW account was larger by almost enough to offset the average 4.95 percent interest paid. The lesser activity, and hence operating cost, of the average savings account also was offset by a smaller balance. Thus, as economic theory predicts, banks and their household customers have adapted successfully to the payment of explicit interest on demand deposits to the degree that returns to different types of accounts are approximately the same.

While the availability of NOW accounts may encourage households to keep larger cash balances, data for the past 30 years indicate a pattern of relative decrease in balances that mirrors the pattern for corporations. The percentage of demand deposits and currency to total liquid assets for households declined from 28.5 percent in 1953 to 13.0 percent in 1982 (see Chart 3).

**Time and Savings Deposits.** Regulation Q ceilings on savings and time deposit rates have benefited banks in the short run, but appear to have hurt savers by an even greater amount. Banks and thrifts benefited from those savers who, because they valued convenience and deposit insurance or were unfamiliar with alternatives, did not shift their funds to higher yielding investments. Hence, when Reg Q was extended to thrifts in 1966, they were able to retain the smaller-balance depositors despite the difference between the average U.S. Treasury three-month bill rate of 5.1 percent and the Reg Q ceiling savings deposit rate of 4 percent. Subsequent increases in the Reg Q ceiling for time deposits to 5.5 percent also helped stem the flow of funds away from thrifts. However, thrifts' deposit growth rate decreased markedly, from 8 percent in 1965 to 2 percent in 1966, which curtailed mortgage lending sharply.<sup>23</sup>

In 1969-70 depository institutions experienced "disintermediation;" that is, their role as an intermediary in the channeling of funds was lessened as savers sought direct routes. Yields on three-month treasury bills rose to above 5 percent in 1968, reaching 6 percent in December 1968 and 7.8 percent in December 1969; by December 1970 they had declined to the Reg Q ceiling on bank savings deposits of 4.75 percent. Disintermediation was partly stemmed when, in February 1970, the U.S. Treasury increased the minimum purchase of bills from \$1,000 to \$10,000, to the obvious detriment of small savers. Depositors with large balances, however, could channel their funds to alternative investments. Commercial banks in effect paid the market interest rate on these large depositors' funds. By February 1970 bank holding companies had issued some \$4.6 billion of commercial paper. An additional \$8 billion was borrowed from nonbank sources by means of federal funds and repurchase sales of securities (RPs).

A sharper period of disintermediation occurred in 1973-74, when the three-month treasury bill rate

exceeded 5 percent in December 1972, increased to 9 percent in August 1974, and declined again to about 5 percent in January 1976. The Reg Q ceiling on savings was raised from 4.5 to 5 percent in July 1973, and interest rate ceilings on certificates of deposit above \$100,000 were entirely suspended in May 1973. When the Reg Q ceiling was below the market rate and for a year thereafter, banks and thrifts experienced sharply lower growth rates in time and savings deposits. Mortgages written also declined sharply through mid-1975.

Money market mutual funds (MMMFs) began to attract savers' funds at this time. Their balances were \$1.7 billion at year end 1974 but grew only to \$3.7 billion in 1976 and 1977 as market interest rates declined to the Reg Q level. However, when the three-month treasury bill rate increased again to 6 percent in September 1977 and continued to climb almost continuously to 15.5 percent in August 1981, the MMMF balances increased tremendously. They reached \$10.8 billion at year end 1978, \$45.2 billion in 1979, \$74.5 billion in 1980, \$181.9 billion in 1981, and \$206.6 billion in 1982. Not until December 1982, when depository institutions could offer MMDAs at a market rate of interest, did the assets of MMMFs decline. As aggregate MMDA balances went from zero to \$375 billion in 1983, MMMF assets dropped by \$66 billions.

The brief chronology of interest rate changes and disintermediation, together with some additional facts, shows first that the Reg Q ceilings, when supplemented by other constraints on disintermediation, have given depository institutions temporary relief from market pressures. However, these benefits were dissipated with the development of other instruments, particularly MMMFs and brokers' cash management accounts, that paid depositors a rate close to a market return on their funds. Second, while the housing market might have benefited from Reg Q ceilings that restrained disintermediation away from mortgage makers, the market was damaged by considerable declines in mortgage lending when sharp market interest rate increases eroded the ability of thrifts and banks to hold depositors' funds. As John T. Boorman and Manfred O. Peterson (1973) show, the Reg Q constraints exacerbated the cyclical swings in housing construction and sales. Third, the interest rate ceilings imposed on chartered financial institutions led to the development of other institutions and

market instruments that now compete for savers' funds.

Though Reg Q initially helped chartered financial institutions, many of the benefits were dissipated through nonprice competition. The convenience provided by branches is an important attraction banks have employed in the competition for deposits. The consequence has been greater operating expenses as is reported for commercial banks by Lawrence J. White (1976) and for mutual savings banks by Robert Taggart (1978). In a study of savings and loans associations, Lewis Spellman found that about half the increases in net revenues from interest rate ceilings are expended in implicit rate competition. Furthermore, as he points out, while "[s]ome techniques, such as advertising and the provision of goods and financial services, can be adjusted easily each year. . . , [o]ther capital intensive techniques, such as branching, parking or drive-in facilities cannot be as quickly adjusted if current rate spreads change[,] but once in place become part of the fixed cost structure."<sup>25</sup>

On the other hand, implicit payment of interest for deposits has been found to decrease depository institutions' risk, measured as the coefficient of variation of net income (the variance of net income over time divided by average net income). John J. Mingo (1978) regressed this measure of risk on a number of variables, including the ratio of interest to total expenses, for a sample of 1,866 banks over the years 1961-72. He concluded that "[t]he results of the regression provide support for the view that reliance on nonprice means of competing for deposit funds can increase bank risk (i.e. the regression coefficient for the interest expense variable is negative and significant at the 0.01 level)."<sup>26</sup> Michael F. Koehn and Bruce S. Stangle (1980) extended Mingo's study by regressing the systematic risk of the banks' shares (measured with the capital asset pricing model for a sample of 110 banks) on a number of variables, including the ratio of interest expense to total operating expense. They report a coefficient for this variable that is strongly insignificant (not different from zero), which indicates that investors do not regard interest payments as increasing the riskiness of bank stocks. Thus Koehn and Stangle concluded that "[r]emoval of such [Reg Q] ceilings would not affect the stockholders of these institutions and may reduce the chance of technical bankruptcy defined by the regulators."<sup>27</sup>

Whereas the regulated depository institutions may not have benefited fully—or, in some important aspects, even at all—from the Reg Q ceiling, savers certainly lost. They were poorer (gross of taxes) by the difference between the interest they would have received had there been no Reg Q and the amount they were paid plus the value to them of nonprice competition (for example branches and gifts) for their funds. As in any constrained situation, the cost of nonprice competition to the financial institutions is almost always greater than its value to consumers.<sup>28</sup>

**Monetary Control.** The prohibition of interest payments on demand deposits and, to a lesser extent, the Reg Q ceiling on savings and time deposits have detracted from the Federal Reserve's ability to control the money supply. The most detrimental effect has been on the velocity of deposit money: its level has increased while its stability has fallen. ("Velocity" is a measure of the relationship between money and spending: An increase in velocity means that money changes hands more frequently.) Since depository institutions are not permitted to pay market rates on deposits, depositors have incentives to seek more efficient uses for balances as interest rates rise. Consequently, the velocity of deposits is heightened. Furthermore, both depositors and nonbank suppliers of financial services also have incentives to develop and substitute alternative means of effecting transactions and investing funds, which in turn boosts velocity. Many of these changes are predictable, and so could be offset by the Federal Reserve through its open market operations. But the increase in velocity expands the extent to which changes in the monetary base (reserves plus currency outside of banks) bear on the effective money supply (monetary base times money multiplier). Ultimately, therefore, the velocity increase has a direct impact on the economy as reflected in nominal GNP (the money supply times velocity). Small changes in the variables the Fed can and cannot directly affect (such as bank reserves and currency) have a greater effect on the variables it wishes to affect (including the price level and real income).

Constraints on interest payments tend to make velocity unpredictable, for two reasons. First, when market interest rates change, depository institutions cannot react as quickly with noninterest rewards as they could with direct interest payments. Depending on the transactions costs

they face, depositors switch their funds to alternative investments, with the resulting change in velocity. Second, it is difficult for the Federal Reserve to forecast the development and success of many particular financial innovations. For example, the money market deposit accounts (MMDAs) introduced in December 1982 and January 1983 had an enormous and almost instantaneous positive effect on bank and thrift deposits, but Super-NOW accounts garnered a relatively small amount of funds.<sup>29</sup> If the money supply were measured as M1 (transactions accounts, excluding MMDAs but including Super-NOWs) and Super-NOWs rather than MMDAs had been favored by depositors, velocity would have decreased sharply. Since MMDAs were favored, M1 velocity was unchanged, unless the funds came from regular demand depositors or NOW accounts. But if M2 (M1 plus passbook savings accounts, small denomination time deposits, overnight Eurodollar balances and repurchase agreements, MMDAs, and MMMFs) were the monetary aggregate of interest, measured velocity would have decreased sharply. While the preferred definition of money is debatable, it seems clear that financial innovations and changes among deposits and money substitutes make the Fed's job more difficult.

A useful analysis of the detrimental effects on the economy of interest rate controls and other regulatory strictures is provided by Donald Jacobs and Almarin Phillips (1983), who were co-directors of the 1970-71 Presidential Commission on Financial Structure and Regulation (the Hunt Commission). They show that, as a consequence of continued deposit interest rate controls, deposit turnover rates rose substantially, which fueled financial instability. In particular, they report that "in New York City the turnover rates on demand deposits rose from about 150 times per year in 1970 to almost 250 times per year in 1973 and—with the large post-1977 increase in interest rates—to over 1,200 per year by 1982."<sup>30</sup> The authors list ways that people contrived to use funds more efficiently, such as more extensive use of the federal funds market and Eurodollar borrowings, greater use of overnight and term repurchase agreements and bankers' acceptances, and shifts of deposits from higher to lower reserve accounts. They conclude: "As a consequence of many of these changes, default risk and interest rate risk increased. In particular, default risk and the risk

of technologically related transaction breakdowns rose tremendously for the commercial banks at the center of the transaction process."<sup>31</sup>

## Removing Deposit Interest Rate Ceilings and Other Controls

**The Positive Effects.** From the history and analysis sketched above, it seems clear that most banks and their customers would benefit if all controls on demand and time deposit interest were removed. If permitted to pay interest on deposits, banks could offer people and companies an efficient vehicle for making fund transfers and investments. Banks could gain economies of scale in funds management by handling more deposits and loans to achieve a smaller and less variable net cash balance. Banks' expertise in investing or borrowing the balance is an important comparative advantage, as are their economies of scale and scope in acquiring and interpreting information about borrowers, and in administering, monitoring, and collecting debt and other investments. Hence, banks should be able to offer many customers a more desirable alternative to direct investment and other means of transferring funds and claims over assets.<sup>32</sup> In the absence of restrictive regulations such as interest rate controls, and special taxes such as non-interest-bearing required reserves, banks thus should be able to offer significant competition to most other suppliers of financial services. And since many banks compete in almost all markets, customers should benefit from banks' comparative advantages.

**The Negative Effects.** Evidence from the period prior to interest-rate controls (essentially, before 1933) offers no support for the belief that uncontrolled interest rates help cause bank failures. Quite the contrary was found: unlike alternative means of obtaining deposits, interest payments seem to provide banks with the flexibility to decrease expenditures when necessary. Furthermore, Reg Q ceilings have made the flow of mortgage money more erratic, since the ceilings encourage disintermediation. Finally, interest rate constraints have made it more difficult for the Federal Reserve to control the effective money supply.

However, federal deposit insurance has been introduced since the pre-control period, which profoundly changes the situation. Now depositors

who have \$100,000 or less in any account need not be concerned with the failure of a depository institution. Until recently most depositors, no matter what their balances, have been protected by the insuring agencies' policy of merging almost all failing institutions into healthy ones. Consequently, many depositors have had no incentive to monitor their institution's activities. Because deposit insurance is not priced directly to reflect the risk to the FDIC or the FSLIC, bankers generally have additional incentives to take risks they otherwise would avoid. A few opportunistic or desperate bankers might take great risks or engage in fraud on the theory, "heads I win, tails the government loses."<sup>33</sup> Were deposit rate controls removed altogether, these bankers and others could offer interest exceeding the market rate for deposits (which, being risk-free to depositors, should grow rapidly). Bankers could invest the funds in ventures in which risk was very great.

The risk incentives of the current insurance system, then, suggest that we need a method for limiting the interest that banks can pay on deposits. But we might ask if that need is particularly compelling in light of the past success of bank regulation in limiting bank failures.

Supervision and field examination is the principal method used by federal and state deposit insurance agencies to control excessive risk-taking, and this close monitoring has been quite effective. In fact, during both the mid-1800s and early 1900s, the state-run deposit insurance funds in states that did not employ strong supervision generally failed as unscrupulous operators exploited the public's belief that their funds were guaranteed safe.<sup>34</sup>

Why does this method, which has worked so well for almost 50 years on the federal level and before that on the state level, now appear to be insufficient? The answer is that two essential changes have taken place in the financial environment, one of which is the increase in insurance coverage to \$100,000 per account. This increase was introduced as improved computer equipment made it inexpensive for depositors and their agents to break down and distribute deposits in fully-insured \$100,000 increments and, thus, invest almost any amount without risk. The other change is the reduced capital investment in banks by shareholders and managers, which

decreases the expected loss from risk-taking. Commercial banks' capital decreased when inflation-driven high nominal interest rates, interest rate regulation, and more efficient technology combined to encourage nonchartered, nonregulated companies to enter banking. Their entry reduced the economic value of the banks' charters, and hence the shareholders' capital investments. In the late 1970s and 1980s, thrift institutions' capital was reduced, and in many cases eliminated, by the unexpected surge in interest rates that lowered the value of their long-term assets (mortgages) more than the value of their liabilities (largely short-term savings and time deposits). Consequently, many bankers today have greater incentives and greater opportunities to take excessive risks. Although better surveillance by the banking authorities is a desirable response to this situation, it is doubtful that it will be sufficient since depositors' motivation to monitor banks has been diminished along with an increase in banks' leverage.<sup>35</sup>

Proposed reforms in deposit insurance are unlikely to reduce substantially the need for some limit on deposit interest and/or deposit insurance. Charging bankers risk-related deposit insurance premiums has been suggested for years by academics and has been proposed by both the FDIC and the FSLIC.<sup>36</sup> This reform has the advantage of charging bankers for the risks they take. However, the idea has foundered because the relevant risks cannot be measured actuarially and because risk-related insurance premiums would not deter a banker who wanted to take dangerous risks.<sup>37</sup>

Privately-supplied deposit insurance also has been proposed.<sup>38</sup> Despite this plan's merits, it cannot be implemented as long as the federal government essentially provides 100 percent insurance, since the guarantee of the U.S. government dominates all others.

Finally, greater investments by shareholders and uninsured creditors would decrease their incentives to "bet the bank." (Mutuals could be required to sell uninsured debentures.<sup>39</sup>) This proposal has the additional advantage of revealing the stock and bond markets' evaluation of the issuing bank, information that can be of value to the supervisory authorities. Unfortunately, one doubts if depository institutions would be able to achieve a sufficiently high proportion of actually uninsured liabilities.

In summary, while some of these proposals can help alleviate the difficulties with deposit insurance, they are not likely to alter the basic problem, namely, the incentive and opportunity for banks to exploit the fact that depositors are essentially unconcerned about the failure of their bank. This is particularly true for opportunistic or desperate bankers, on whom most of the reform proposals would have little effect.

Therefore, I suggest the following three proposals. First, since time-dated deposits are not subject to instant withdrawals except with a considerable penalty, they need not be fully insured. Limiting de facto government insurance to, say, \$40,000 per person would prevent investors with large sums from investing free of risk of monitoring bank performance. Furthermore, it would encourage risk-taking by bankers and make it more difficult for them to defraud the insurance fund.<sup>40</sup>

The second proposal is that interest on time deposits above a much smaller amount would not be covered by government insurance. Thus a depositor need not fear losing principal but would have some concern about the performance of the bank. This change would make it difficult to acquire large sums by offering above market rates if depositors have reason to fear that higher risk accompanied the higher rates.

With these reforms in place, control of the interest rate that banks can offer time depositors would be unnecessary. Those who respond to higher rates would have reason to be concerned about their funds.

However, it is neither desirable nor feasible to insure demand deposits only partly, since depositors with uninsured balances would have cause to remove their funds at the first rumor of failure. These depositors, therefore, would need to monitor the bank's activities only to the extent of being able to obtain important negative information quickly. In any event, demand deposits must continue to be withdrawable on demand; the FDIC was forced to recognize this and to extend its guarantee to all deposits when the Continental Illinois Bank's uninsured depositors started to withdraw their funds.

Because demand deposits are virtually fully insured and probably will continue to be, risk-taking bankers can offer above-market interest rates for risk-free investments simply by labeling the accounts "demand deposits." The handiness of this ploy dictates the necessity for a third proposal—an interest rate ceiling on

demand deposits. But the ceiling should not constrain a bank offering true transactions accounts from offering depositors the highest risk-adjusted rate possible. Transactions accounts yield the depositor returns in the form of service, and necessarily require a bank to incur operations costs. Therefore, the ceiling rate should be no less than the market rate for low-risk funds plus the value of the transactions services to the depositor. One such ceiling might be the U.S. Treasury 30-day bill rate less 100 basis points.<sup>41</sup> The depositor could be charged for items processed and given credit for funds deposited at any rate so long as the net return to the customer did not exceed the ceiling. This regulation would be effective in preventing opportunistic bankers from taking advantage of deposit insurance while allowing prudent bankers to compete for transactions balances.

## Summary and Conclusion

Federal controls were imposed on deposit interest rates in the early 1930s. Some fear that removing the prohibition against paying interest on demand deposits and Regulation Q ceilings on time deposit interest rates would prove devastating to the banking system. Reasoning that the controls were imposed in response to the severe banking crisis of the 1930s, they conclude that such conditions would recur were the controls removed.

However, several studies show that before the 1930s interest payments on deposits were not associated with risky bank investments or with bank suspensions. Nor were interest payments on bankers' balances linked to the adverse movement of funds from country to city banks and to stock market speculators. Rather, interest payments provided an efficient means of paying depositors, including country banks, for the use of their funds.

Indeed, were depository institutions permitted to pay interest for deposits and were they not subject to a special tax in the form of required noninterest-bearing reserves, they would be able to offer the public a superb product. Depository financial institutions possess comparative advantages in information and portfolio management that generally are often superior to alternatives, such as money market mutual funds and commercial paper. Federal controls

on deposit interest rates, in fact, are responsible for the development of substitutes and banking practices.

In the absence of deposit insurance, interest rate controls should be removed. But deposit insurance makes it possible—indeed, likely—that some bankers will take advantage of depositors' confidence by engaging in overly risky or even fraudulent practices. With loss to the depositors obviated, these bankers could offer a return higher than the market interest rate to attract large sums in deposits. This important concern can be dealt with by limiting the maximum amount of insured deposits to, say, no more than \$100,000 per person in all accounts. Depositor concern, and bank supervision, then would reduce the moral hazard that accompanies deposit insurance so that interest rates could be freed from control. But fear of bank runs prevents placing such an

insurance limitation on demand deposits. Furthermore, opportunistic bankers could take advantage of a loophole that enables them to offer above-market interest rates on mislabeled "demand deposits." Hence, interest rate ceilings slightly below the U.S. Treasury bill rate should be placed on demand deposits, ceilings designed so that the transactions value of a true demand deposit would make up the difference between the interest rate ceiling and the bill rate. In this way, the control would be operational only where deposits were not really used for transactions. With these changes in place and with special taxes removed, chartered depository institutions could employ their inherent comparative advantages for the great benefit both of themselves and the nation.

(The author is grateful to B. Frank King for his considerable intellectual and editorial contributions to this article.)

#### NOTES

<sup>1</sup>See George J. Benston (1964).

<sup>2</sup>Brian C. Gendreau (1979, p. 507) reports that "[t]he interest rate paid on bankers' balances was effectively constant—at approximately 2 percent—for most of the 1885-1930 period." However, he points out that policy-makers (such as Senator Carter Glass) who expressed puzzlement at the constancy "do not appear to have appreciated that interbank deposits provided country banks with convenience and services in addition to a 2 percent interest return" (p. 507). In addition, Charles M. Linke (1966, p. 456) reports that "the available literature indicates that there was some manipulation of interest rates paid via changes in service charges."

<sup>3</sup>In his history of deposit interest regulation, Charles M. Linke (1966) reported that although "the most important argument for the regulation of interest on deposits arises from the role that deposit interest was thought to have played in causing financial crises," concern during the twentieth century emphasized bankers' balances (pp. 452-53).

<sup>4</sup>The conclusions are taken from an analysis in George J. Benston (1964).  
<sup>5</sup>These and the following statistics are from George J. Benston (1973), pp. 22-31.

<sup>6</sup>In the Rocky Mountain states, 34 percent of the banks were suspended; however, these represented only 2.5 percent of the suspensions nationwide.

<sup>7</sup>Robert F. Stauffer (1981) finds no significant correlation between failures in 1930 and 1931 and changes in cotton and agricultural income as a ratio of personal income in the 11 cotton states, which indicates that, unlike the 1920s, the Great Depression was a period of general failures.

<sup>8</sup>The study used semi-annual data. See Brian C. Gendreau (1979), p. 511. The coefficients are significant at the .01 level.

<sup>9</sup>Charles M. Linke (1966), p. 460.

<sup>10</sup>See George J. Benston (1979) for a more complete explication.

<sup>11</sup>Charles M. Linke (1966), p. 461.

<sup>12</sup>See Robert J. Lawrence and Duane Lougee (1970) and Robert E. Knight (1976) for surveys of correspondent bank services.

<sup>13</sup>See David Wiley Mullins, Jr. (1976) for references to the surveys.

<sup>14</sup>Murray E. Polakoff and Morris Budin (1973), pp. 5-6.

<sup>15</sup>Ibid., Charts 1 and 2.

<sup>16</sup>Use of the ratio of commercial paper to bank business loans removes the effects of inflation on the apparent growth of nominal balances.

<sup>17</sup>Murray E. Polakoff and Morris Budin (1973, p. 14) explain the lack of growth of nonfinancial commercial paper before 1966 as "the result of rate insensitivity on the part of nonfinancial borrowers at this time or... to market segmentation which effectively disbarred many of them from taking advantage of favorable rate differentials. [In any event], the large banks were obviously content." They explain the growth of commercial paper outstanding after 1966 as a result of the "credit squeezes" of 1966 and 1969, when banks did not have funds to lend and borrowers had to turn to other sources.

<sup>18</sup>For an explication of the relevant regulations and data on the levels and types of bankers' acceptances, see Jack L. Hervey (1983).

<sup>19</sup>For a history of NOW accounts and an analysis of their impact, see Federal Reserve Bank of Boston (1981) and Joanna H. Frodin and Richard Startz (1982).

<sup>20</sup>For details of the regulations governing these accounts, see Gillian Garcia and Annie MacMahon (1984).

<sup>21</sup>See Federal Reserve Bank of Boston (1981), Joanna H. Frodin and Richard Startz (1982), and references therein.

<sup>22</sup>As reported by B. G. Hartzog, Jr. (1978), who studied the experience of 60 thrifts in Massachusetts and New Hampshire over the period 1972-1975.

<sup>23</sup>Edward F. McKelvey (1978), p. 28.

<sup>24</sup>Ibid., pp. 33-34.

<sup>25</sup>Lewis Spellman (1980), p. 134.

<sup>26</sup>John J. Mingo (1978), p. 373. Emphasis in the original.

<sup>27</sup>Ibid., p. 385.

<sup>28</sup>See David H. Pyle (1974) for estimates of the cost of Reg Q ceilings to savers.

<sup>29</sup>Gillian Garcia and Annie McMahon (1984) compute and show graphically the sharp and considerable deviations from trend that occurred

<sup>30</sup>Donald Jacobs and Almarin Phillips (1983), p. 255.

<sup>31</sup>Ibid., p. 257.

<sup>32</sup>For a more complete discussion, see George J. Benston and Clifford W. Smith (1976).

<sup>33</sup>See George J. Benston (1984) for a description of the ways in which the deposit insurance fund can be defrauded.

<sup>34</sup>Descriptions and evaluations of the state deposit guarantee plans may be found in George J. Benston (1973), pp. 50-52.

<sup>35</sup>Surveillance and early warning systems are described and discussed in several articles in *Economic Review* (Federal Reserve Bank of Atlanta), vol. 68 (November 1983).

<sup>36</sup>For concisely stated arguments against and for risk-related deposit insurance premiums, see Paul M. Horvitz (1983) and Paul T. Peterson (1983).

<sup>37</sup>Indeed, the maximum differentials proposed by the FDIC and FSLIC are only 4 to 5 and 12.5 basis points per dollar of deposits.

<sup>38</sup>For example, the *Final Report of the Sixty-Fourth American Assembly* (1983, p. 7) recommended that "[g]overnment insurance, approved private insurance, or some combination thereof, should be required for demand transactions accounts that are fully backed by liquid assets and for savings and time deposits."

<sup>39</sup>For an elaboration of this suggestion, see George J. Benston (1976).

<sup>40</sup>For a detailed discussion of such proposals see George J. Benston, "Deposit Insurance and Bank Failures" (1983), pp. 4-17.

<sup>41</sup>Based on Functional Cost Analysis data, which includes allocations of overhead. Herb Taylor (1984, Table 1) reports operating costs on NOW accounts of no less than 1.9 percent. Large business accounts are likely to have lower per dollar costs.

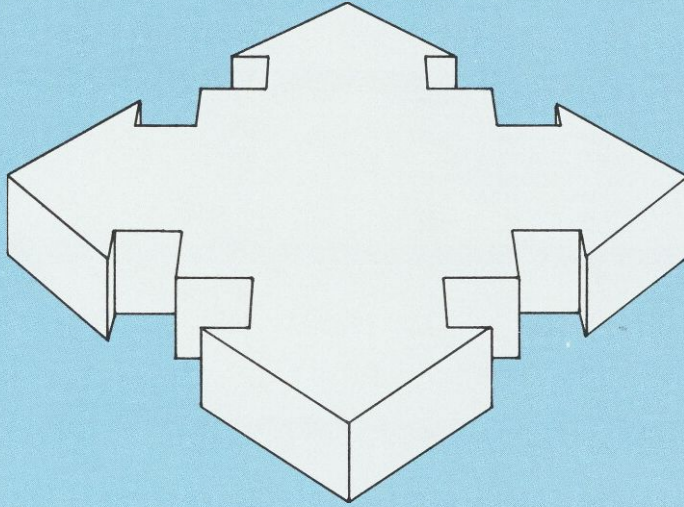
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# FINANCE

# STATISTICAL SUPPLEMENT

	JUL 1984	JUN 1984	JUL 1983	ANN. % CHG.		JUL 1984	JUN 1984	JUL 1983	ANN. % CHG.
<b>\$ millions</b>									
<b>UNITED STATES</b>									
Commercial Bank Deposits	1,380,284	1,374,549	1,283,357	+ 8	Savings & Loans**	674,306	665,403	612,257	+ 10
Demand	314,187	318,975	324,565	- 3	Total Deposits	19,742	20,359	17,744	+ 11
NOW	88,711	90,640	81,761	+ 8	NOW	170,782	173,689	186,991	- 9
Savings	358,996	361,157	344,649	+ 4	Savings	485,834	474,331	411,194	+ 18
Time	659,078	650,632	580,314	+ 14	Time				
Credit Union Deposits	52,997	52,569	61,395	- 14		<b>JUN</b>	<b>MAY</b>	<b>JUN</b>	
Share Drafts	5,526	5,650	5,535	- 0	Mortgages Outstanding	563,565	553,748	489,007	+ 15
Savings & Time	47,264	46,932	49,847	- 5	Mortgage Commitments	47,330	48,316	31,773	+ 48
<b>SOUTHEAST</b>									
Commercial Bank Deposits	157,580	157,153	144,736	+ 9	Savings & Loans				
Demand	36,336	37,388	37,317	- 3	Total Deposits	89,238	88,505	N.A.	
NOW	11,402	11,765	10,441	+ 9	NOW	3,084	3,255	N.A.	
Savings	40,807	40,934	38,019	+ 7	Savings	21,307	21,692	N.A.	
Time	73,111	72,069	63,480	+ 15	Time	65,182	64,093	N.A.	
Credit Union Deposits	6,209	6,137	5,875	+ 6		<b>JUN</b>	<b>MAY</b>	<b>JUN</b>	
Share Drafts	540	567	485	+ 11	Mortgages Outstanding	71,107	70,345	66,196	+ 7
Savings & Time	5,498	5,447	4,974	+ 10	Mortgage Commitments	5,533	5,427	4,593	+ 20
<b>ALABAMA</b>									
Commercial Bank Deposits	16,455	16,409	15,284	+ 8	Savings & Loans**				
Demand	3,712	3,852	3,897	- 5	Total Deposits	5,436	5,391	5,054	+ 8
NOW	1,021	1,051	922	+ 10	NOW	158	166	140	+ 13
Savings	3,322	3,343	3,194	+ 4	Savings	877	902	894	- 2
Time	8,851	8,768	7,896	+ 12	Time	4,441	4,362	4,086	+ 9
Credit Union Deposits	974	966	911	+ 7		<b>JUN</b>	<b>MAY</b>	<b>JUN</b>	
Share Drafts	97	100	85	+ 14	Mortgages Outstanding	4,166	4,096	3,657	+ 14
Savings & Time	843	842	774	+ 9	Mortgage Commitments	289	279	205	+ 41
<b>FLORIDA</b>									
Commercial Bank Deposits	55,623	55,565	50,393	+ 10	Savings & Loans**				
Demand	12,792	13,346	13,309	- 4	Total Deposits	57,273	56,706	54,403	+ 5
NOW	4,717	4,919	4,411	+ 7	NOW	2,155	2,296	2,138	+ 1
Savings	19,201	19,271	17,195	+ 12	Savings	14,687	14,960	17,068	- 14
Time	20,161	19,681	16,795	+ 20	Time	40,425	39,581	35,709	+ 13
Credit Union Deposits	2,728	2,693	2,570	+ 6		<b>JUN</b>	<b>MAY</b>	<b>JUN</b>	
Share Drafts	272	280	245	+ 11	Mortgages Outstanding	41,759	41,305	39,068	+ 7
Savings & Time	2,300	2,272	1,994	+ 15	Mortgage Commitments	3,386	3,387	3,241	+ 4
<b>GEORGIA</b>									
Commercial Bank Deposits	24,109	23,877	20,710	+ 16	Savings & Loans				
Demand	7,363	7,472	7,080	+ 4	Total Deposits	8,020	7,926	N.A.	
NOW	1,506	1,538	1,382	+ 9	NOW	266	274	N.A.	
Savings	5,498	5,417	4,668	+ 18	Savings	1,787	1,786	N.A.	
Time	10,993	10,835	8,844	+ 24	Time	6,075	5,999	N.A.	
Credit Union Deposits	1,303	1,280	1,334	- 2		<b>JUN</b>	<b>MAY</b>	<b>JUN</b>	
Share Drafts	82	84	68	+ 21	Mortgages Outstanding	8,799	8,653	8,144	+ 8
Savings & Time	1,213	1,197	1,196	+ 1	Mortgage Commitments	553	541	455	+ 21
<b>LOUISIANA</b>									
Commercial Bank Deposits	25,881	25,887	24,986	+ 4	Savings & Loans**				
Demand	5,689	5,826	6,025	- 6	Total Deposits	9,540	9,424	9,407	+ 1
NOW	1,502	1,530	1,378	+ 9	NOW	236	237	178	+ 33
Savings	5,533	5,560	5,307	+ 4	Savings	2,275	2,325	2,453	- 7
Time	13,688	13,569	12,877	+ 6	Time	7,150	6,992	5,864	+ 22
Credit Union Deposits	211	210	192	+ 10		<b>JUN</b>	<b>MAY</b>	<b>JUN</b>	
Share Drafts	23	24	22	+ 5	Mortgages Outstanding	8,865	8,734	7,529	+ 18
Savings & Time	207	206	189	+ 10	Mortgage Commitments	712	591	462	+ 54
<b>MISSISSIPPI</b>									
Commercial Bank Deposits	12,147	12,121	11,497	+ 6	Savings & Loans				
Demand	2,352	2,384	2,481	- 5	Total Deposits	2,031	2,010	N.A.	
NOW	829	855	784	+ 6	NOW	78	80	N.A.	
Savings	2,402	2,450	2,459	- 2	Savings	388	394	N.A.	
Time	6,880	6,811	6,128	+ 12	Time	1,596	1,585	N.A.	
Credit Union Deposits	*	*	*			<b>JUN</b>	<b>MAY</b>	<b>JUN</b>	
Share Drafts	*	*	*		Mortgages Outstanding	2,076	2,083	1,997	+ 4
Savings & Time	*	*	*		Mortgage Commitments	214	217	40	+435
<b>TENNESSEE</b>									
Commercial Bank Deposits	23,365	23,294	21,866	+ 7	Savings & Loans**				
Demand	4,428	4,508	4,525	- 2	Total Deposits	6,938	7,048	N.A.	
NOW	1,827	1,872	1,564	+ 17	NOW	191	202	N.A.	
Savings	4,851	4,893	5,196	- 7	Savings	1,293	1,325	N.A.	
Time	12,538	12,405	10,940	+ 15	Time	5,495	5,574	N.A.	
Credit Union Deposits	993	988	868	+ 14		<b>JUN</b>	<b>MAY</b>	<b>JUN</b>	
Share Drafts	67	79	65	+ 3	Mortgages Outstanding	5,442	5,474	5,801	- 6
Savings & Time	935	930	821	+ 14	Mortgage Commitments	379	412	190	+ 99

**Notes:** All deposit data are extracted from the Federal Reserve Report of Transaction Accounts, other Deposits and Vault Cash (FR2900), and are reported for the average of the week ending the 1st Wednesday of the month. This data, reported by institutions with over \$15 million in deposits as of December 31, 1979, represents 95% of deposits in the six state area. The major differences between this report and the "call report" are size, the treatment of interbank deposits, and the treatment of float. The data generated from the Report of Transaction Accounts is for banks over \$15 million in deposits as of December 31, 1979. The total deposit data generated from the Report of Transaction Accounts eliminates interbank deposits by reporting the net of deposits "due to" and "due from" other depository institutions. The Report of Transaction Accounts subtracts cash items in process of collection from demand deposits, while the call report does not. Savings and loan mortgage data are from the Federal Home Loan Bank Board Selected Balance Sheet Data. The Southeast data represent the total of the six states. Subcategories were chosen on a selective basis and do not add to total.

\* = fewer than four institutions reporting.  
 \*\* = S&L deposits subject to revisions due to reporting changes.  
 N.A. = not comparable with previous data at this time.

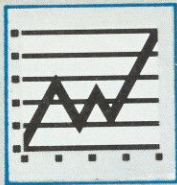


# CONSTRUCTION

	JULY 1984	JUNE 1984	JULY 1983	ANN % CHG		JULY 1984	JUNE 1984	JULY 1983	ANN % CHG
<b>12-month Cumulative Rate</b>									
<b>UNITED STATES</b>									
Nonresidential Building Permits - \$ Mil.					Residential Building Permits				
Total Nonresidential	58,587	57,260	46,560	+ 26	Value - \$ Mil.	74,834	74,849	57,555	+30
Industrial Bldgs.	7,730	7,468	5,079	+ 52	Residential Permits - Thous.				
Offices	14,014	13,777	11,512	+ 22	Single-family units	920.1	924.7	787.6	+17
Stores	8,883	8,536	5,827	+ 52	Multi-family units	764.1	766.5	595.1	+28
Hospitals	1,865	1,874	1,889	- 1	Total Building Permits				
Schools	891	829	846	+ 5	Value - \$ Mil.	133,421	132,109	104,115	+28
<b>SOUTHEAST</b>									
Nonresidential Building Permits - \$ Mil.					Residential Building Permits				
Total Nonresidential	8,972	8,899	7,184	+ 25	Value - \$ Mil.	14,195	14,159	10,333	+37
Industrial Bldgs.	897	887	622	+ 44	Residential Permits - Thous.				
Offices	2,015	2,040	1,696	+ 19	Single-family units	190.7	191.4	162.1	+18
Stores	1,741	1,662	1,076	+ 62	Multi-family units	180.6	181.9	125.2	+44
Hospitals	475	479	424	+ 12	Total Building Permits				
Schools	116	117	166	- 30	Value - \$ Mil.	23,167	23,058	17,517	+32
<b>ALABAMA</b>									
Nonresidential Building Permits - \$ Mil.					Residential Building Permits				
Total Nonresidential	736	725	379	+ 94	Value - \$ Mil.	478	479	353	+35
Industrial Bldgs.	184	180	28	+557	Residential Permits - Thous.				
Offices	80	81	53	+ 51	Single-family units	8.2	8.2	7.2	+14
Stores	111	110	66	+ 68	Multi-family units	8.2	8.9	6.4	+28
Hospitals	14	13	30	- 53	Total Building Permits				
Schools	6	8	8	- 25	Value - \$ Mil.	1,214	1,204	732	+66
<b>FLORIDA</b>									
Nonresidential Building Permits - \$ Mil.					Residential Building Permits				
Total Nonresidential	4,362	4,290	3,636	+ 20	Value - \$ Mil.	8,300	8,230	5,920	+40
Industrial Bldgs.	428	413	324	+ 32	Residential Permits - Thous.				
Offices	933	907	809	+ 15	Single-family units	104.4	104.5	84.8	+23
Stores	995	957	596	+ 67	Multi-family units	99.7	98.9	70.0	+42
Hospitals	218	223	258	- 16	Total Building Permits				
Schools	45	43	52	- 13	Value - \$ Mil.	12,662	12,520	9,556	+33
<b>GEORGIA</b>									
Nonresidential Building Permits - \$ Mil.					Residential Building Permits				
Total Nonresidential	1,608	1,632	1,125	+ 43	Value - \$ Mil.	2,733	2,732	2,062	+33
Industrial Bldgs.	168	176	155	+ 8	Residential Permits - Thous.				
Offices	517	554	320	+ 62	Single-family units	43.4	43.6	37.4	+16
Stores	236	221	114	+107	Multi-family units	27.7	27.5	21.2	+31
Hospitals	62	61	26	+138	Total Building Permits				
Schools	17	17	24	- 29	Value - \$ Mil.	4,341	4,364	3,187	+36
<b>LOUISIANA</b>									
Nonresidential Building Permits - \$ Mil.					Residential Building Permits				
Total Nonresidential	1,184	1,165	1,148	+ 3	Value - \$ Mil.	1,170	1,177	923	+27
Industrial Bldgs.	29	30	56	- 48	Residential Permits - Thous.				
Offices	307	329	380	- 19	Single-family units	15.5	15.9	15.9	- 3
Stores	204	175	120	+ 70	Multi-family units	17.5	17.7	12.5	+40
Hospitals	148	149	60	+147	Total Building Permits				
Schools	41	41	65	- 37	Value - \$ Mil.	2,354	2,342	2,071	+14
<b>MISSISSIPPI</b>									
Nonresidential Building Permits - \$ Mil.					Residential Building Permits				
Total Nonresidential	246	243	165	+ 49	Value - \$ Mil.	383	374	256	+50
Industrial Bldgs.	14	14	6	+133	Residential Permits - Thous.				
Offices	27	27	15	+ 80	Single-family units	5.5	5.4	4.6	+20
Stores	51	53	34	+ 50	Multi-family units	6.1	5.8	3.1	+97
Hospitals	13	14	14	- 7	Total Building Permits				
Schools	1	1	8	- 88	Value - \$ Mil.	629	617	421	+49
<b>TENNESSEE</b>									
Nonresidential Building Permits - \$ Mil.					Residential Building Permits				
Total Nonresidential	836	844	731	+ 14	Value - \$ Mil.	1,131	1,167	819	+38
Industrial Bldgs.	74	74	53	+ 40	Residential Permits - Thous.				
Offices	151	142	119	+ 27	Single-family units	13.7	13.8	12.2	+12
Stores	144	146	146	- 1	Multi-family units	21.4	23.1	12.0	+78
Hospitals	20	19	36	- 44	Total Building Permits				
Schools	6	7	9	- 33	Value - \$ Mil.	1,967	2,011	1,550	+27

## NOTES:

Data supplied by the U. S. Bureau of the Census, Housing Units Authorized By Building Permits and Public Contracts, C-40. Nonresidential data excludes the cost of construction for publicly owned buildings. The southeast data represent the total of the six states. The annual percent change calculation is based on the most recent month over prior year. Publication of F. W. Dodge construction contracts has been discontinued.



# GENERAL

	LATEST DATA	CURR. PERIOD	PREV. PERIOD	YEAR AGO	ANN. % CHG.		AUG 1984	JUL (R) 1984	AUG 1983	ANN. % CHG.
<b>UNITED STATES</b>										
<b>Personal Income</b>						<b>Agriculture</b>				
(\$bil. - SAAR)	1Q	2,910.0	2,824.2	2,647.2	+10	Prices Rec'd by Farmers Index (1977=100)	144	144	139	+ 4
Taxable Sales - \$ bil.		N.A.	N.A.	N.A.		Broiler Placements (thous.)	84,353	83,960	79,386	+ 6
Plane Pass. Arr. 000's	JUN	N.A.	N.A.	N.A.		Calf Prices (\$ per cwt.)	58.1	58.5	58.3	- 0
Petroleum Prod. (thous.)	AUG	8,781.2	8,728.7	8,648.6	+ 2	Broiler Prices (¢ per lb.)	30.6	35.5	31.8	- 4
Consumer Price Index 1967=100	AUG	313.0	311.7	300.3	+ 4	Soybean Prices (\$ per bu.)	6.46	6.95	8.09	-20
Kilowatt Hours - mils.	MAY	175.0	174.9	158.6	+10	Broiler Feed Cost (\$ per ton)	225	233	228	- 1
<b>SOUTHEAST</b>										
<b>Personal Income</b>						<b>Agriculture</b>				
(\$bil. - SAAR)	1Q	350.6	341.9	318.8	+10	Prices Rec'd by Farmers Index (1977=100)	144	139	131	+10
Taxable Sales - \$ bil.		N.A.	N.A.	N.A.		Broiler Placements (thous.)	32,059	31,861	30,270	+ 6
Plane Pass. Arr. 000's	JUN	4,669.3	4,970.9	4,411.0	+ 6	Calf Prices (\$ per cwt.)	55.5	54.8	53.7	+ 3
Petroleum Prod. (thous.)	AUG	1,482.5	1,483.5	1,381.0	+ 7	Broiler Prices (¢ per lb.)	28.9	34.3	31.4	- 8
Consumer Price Index 1967=100		N.A.	N.A.	N.A.		Soybean Prices (\$ per bu.)	6.54	6.77	8.03	-19
Kilowatt Hours - mils.	MAY	28.2	26.4	24.9	+13	Broiler Feed Cost (\$ per ton)	224	237	217	+ 3
<b>ALABAMA</b>										
<b>Personal Income</b>						<b>Agriculture</b>				
(\$bil. - SAAR)	1Q	38.0	37.7	35.2	+ 8	Farm Cash Receipts - \$ mil. (Dates: MAY, MAY)	808	-	762	+ 6
Taxable Sales - \$ bil.		N.A.	N.A.	N.A.		Broiler Placements (thous.)	10,720	10,723	10,034	+ 7
Plane Pass. Arr. 000's	JUN	122.8	120.3	123.7	- 1	Calf Prices (\$ per cwt.)	52.7	53.4	52.1	+ 1
Petroleum Prod. (thous.)	AUG	52.0	52.0	53.0	- 2	Broiler Prices (¢ per lb.)	28.0	32.5	31.5	-11
Consumer Price Index 1967=100		N.A.	N.A.	N.A.		Soybean Prices (\$ per bu.)	6.35	6.60	7.79	-18
Kilowatt Hours - mils.	MAY	3.7	3.4	3.3	+12	Broiler Feed Cost (\$ per ton)	220	240	225	- 2
<b>FLORIDA</b>										
<b>Personal Income</b>						<b>Agriculture</b>				
(\$bil. - SAAR)	1Q	132.4	128.8	118.7	+12	Farm Cash Receipts - \$ mil. (Dates: MAY, MAY)	2,009	-	2,626	-23
Taxable Sales - \$ bil.	AUG	80.7	80.0	70.7	+14	Broiler Placements (thous.)	1,852	1,918	1,956	- 5
Plane Pass. Arr. 000's	JUN	2,198.7	2,514.5	2,142.1	+ 3	Calf Prices (\$ per cwt.)	59.0	59.3	59.3	- 1
Petroleum Prod. (thous.)	AUG	40.0	41.0	59.0	-32	Broiler Prices (¢ per lb.)	29.0	34.0	31.0	- 6
Consumer Price Index - Miami Nov. 1977 = 100	JUL	167.0	166.4	160.8	+ 4	Soybean Prices (\$ per bu.)	6.35	6.60	7.79	-18
Kilowatt Hours - mils.	MAY	8.0	7.1	6.8	+18	Broiler Feed Cost (\$ per ton)	245	255	235	+ 4
<b>GEORGIA</b>										
<b>Personal Income</b>						<b>Agriculture</b>				
(\$bil. - SAAR)	1Q	62.8	61.0	56.7	+11	Farm Cash Receipts - \$ mil. (Dates: MAY, MAY)	1,122	-	1,046	-23
Taxable Sales - \$ bil.	2Q	47.5	46.2	42.1	+13	Broiler Placements (thous.)	N.A.	N.A.	N.A.	
Plane Pass. Arr. 000's	JUN	1,788.8	1,801.0	1,676.7	+ 7	Calf Prices (\$ per cwt.)	53.0	52.0	50.4	+ 5
Petroleum Prod. (thous.)		N.A.	N.A.	N.A.		Broiler Prices (¢ per lb.)	28.0	34.6	30.5	- 8
Consumer Price Index - Atlanta 1967 = 100	AUG	315.9	314.0	303.9	+ 4	Soybean Prices (\$ per bu.)	6.34	6.86	7.68	-17
Kilowatt Hours - mils.	MAY	4.5	4.1	4.2	+ 7	Broiler Feed Cost (\$ per ton)	245	255	210	+17
<b>LOUISIANA</b>										
<b>Personal Income</b>						<b>Agriculture</b>				
(\$bil. - SAAR)	1Q	48.5	47.3	45.6	+ 6	Farm Cash Receipts - \$ mil. (Dates: MAY, MAY)	515	-	514	+ 0
Taxable Sales - \$ bil.		N.A.	N.A.	N.A.		Broiler Placements (thous.)	N.A.	N.A.	N.A.	
Plane Pass. Arr. 000's	JUN	345.5	330.0	276.1	+25	Calf Prices (\$ per cwt.)	56.5	56.5	56.0	+ 1
Petroleum Prod. (thous.)	AUG	1,300.0	1,300.0	1,185.0	+10	Broiler Prices (¢ per lb.)	31.0	35.5	32.5	- 5
Consumer Price Index 1967 = 100		N.A.	N.A.	N.A.		Soybean Prices (\$ per bu.)	6.75	6.90	8.33	-19
Kilowatt Hours - mils.	MAY	4.7	4.3	3.9	+21	Broiler Feed Cost (\$ per ton)	265	270	270	- 2
<b>MISSISSIPPI</b>										
<b>Personal Income</b>						<b>Agriculture</b>				
(\$bil. - SAAR)	1Q	22.3	21.8	20.2	+10	Farm Cash Receipts - \$ mil. (Dates: MAY, MAY)	704	-	787	-11
Taxable Sales - \$ bil.		N.A.	N.A.	N.A.		Broiler Placements (thous.)	6,358	6,376	6,068	+ 5
Plane Pass. Arr. 000's	JUN	37.3	35.2	37.5	- 1	Calf Prices (\$ per cwt.)	56.3	54.7	53.4	+ 5
Petroleum Prod. (thous.)	AUG	90.5	90.5	84.0	+ 8	Broiler Prices (¢ per lb.)	31.5	36.5	32.5	- 3
Consumer Price Index 1967 = 100		N.A.	N.A.	N.A.		Soybean Prices (\$ per bu.)	6.60	6.73	8.03	-18
Kilowatt Hours - mils.	MAY	1.9	1.8	1.7	+12	Broiler Feed Cost (\$ per ton)	178	188	197	-10
<b>TENNESSEE</b>										
<b>Personal Income</b>						<b>Agriculture</b>				
(\$bil. - SAAR)	1Q	46.6	45.3	42.4	+10	Farm Cash Receipts - \$ mil. (Dates: MAY, MAY)	626	-	670	- 7
Taxable Sales - \$ bil.	AUG	50.4	49.3	44.7	+13	Broiler Placements (thous.)	N.A.	N.A.	N.A.	
Plane Pass. Arr. 000's	JUN	176.2	169.9	154.9	+14	Calf Prices (\$ per cwt.)	55.1	52.7	50.8	+ 8
Petroleum Prod. (thous.)	AUG	N.A.	N.A.	N.A.		Broiler Prices (¢ per lb.)	29.5	34.5	31.5	- 6
Consumer Price Index 1967 = 100		N.A.	N.A.	N.A.		Soybean Prices (\$ per bu.)	6.47	6.79	8.08	-20
Kilowatt Hours - mils.	MAY	5.4	5.7	5.0	+ 8	Broiler Feed Cost (\$ per ton)	200	205	215	- 7

**Notes:** Personal Income data supplied by U. S. Department of Commerce. Taxable Sales are reported as a 12-month cumulative total. Plane Passenger Arrivals are collected from 26 airports. Petroleum Production data supplied by U. S. Bureau of Mines. Consumer Price Index data supplied by Bureau of Labor Statistics. Agriculture data supplied by U. S. Department of Agriculture. Farm Cash Receipts data are reported as cumulative for the calendar year through the month shown. Broiler placements are an average weekly rate. The Southeast data represent the total of the six states. N.A. = not available. The annual percent change calculation is based on most recent data over prior year. R = revised.



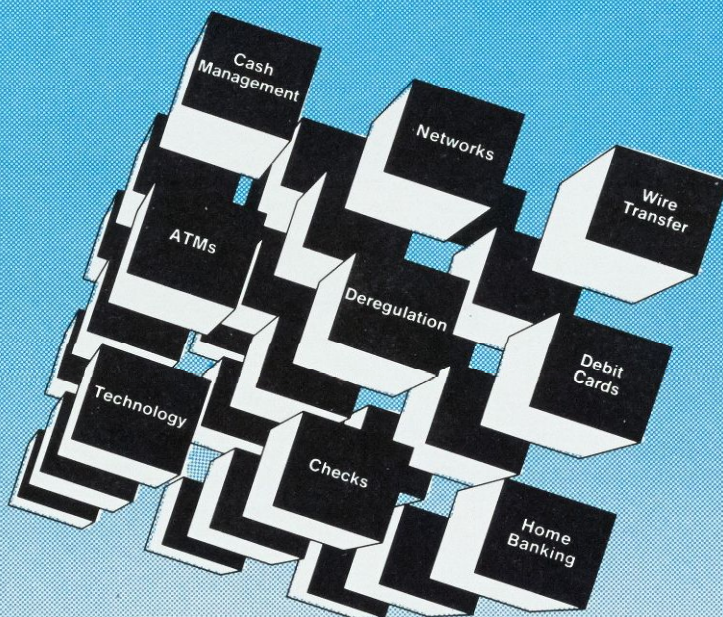
# EMPLOYMENT

	JULY 1984	JUNE 1984	JULY 1983	ANN. % CHG.		JULY 1984	JUNE 1984	JULY 1983	ANN. % CHG.
<b>UNITED STATES</b>									
Civilian Labor Force - thous.	116,198	115,393	113,980	+ 2	Nonfarm Employment- thous.	94,264	94,948	90,112	+ 5
Total Employed - thous.	107,484	106,812	103,273	+ 4	Manufacturing	19,690	19,780	18,464	+ 7
Total Unemployed - thous.	8,714	8,582	10,707	-19	Construction	4,647	4,522	4,185	+11
Unemployment Rate - % SA	7.5	7.1	9.5		Trade	21,871	21,885	20,920	+ 5
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	15,208	16,010	15,111	+ 1
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	20,878	20,817	19,901	+ 5
Mfg. Avg. Wkly. Hours	40.4	40.8	40.0	+ 1	Fin., Ins., & Real Est.	5,755	5,721	5,552	+ 4
Mfg. Avg. Wkly. Earn. - \$	370	373	354	+ 5	Trans. Com. & Pub. Util.	5,199	5,200	5,020	+ 4
<b>SOUTHEAST</b>									
Civilian Labor Force - thous.	15,040	14,941	14,746	+ 2	Nonfarm Employment- thous.	12,029	12,097	11,523	+ 4
Total Employed - thous.	13,796	13,744	13,235	+ 4	Manufacturing	2,262	2,276	2,157	+ 5
Total Unemployed - thous.	1,244	1,197	1,510	-18	Construction	748	740	671	+11
Unemployment Rate - % SA	8.1	7.8	9.7		Trade	2,950	2,933	2,786	+ 6
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	2,095	2,169	2,081	+ 1
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	2,437	2,446	2,339	+ 4
Mfg. Avg. Wkly. Hours	40.7	41.4	40.4	+ 1	Fin., Ins., & Real Est.	703	701	671	+ 5
Mfg. Avg. Wkly. Earn. - \$	326	330	310	+ 5	Trans. Com. & Pub. Util.	706	703	694	+ 2
<b>ALABAMA</b>									
Civilian Labor Force - thous.	1,799	1,795	1,799	0	Nonfarm Employment- thous.	1,351	1,360	1,332	+ 1
Total Employed - thous.	1,587	1,600	1,545	+ 3	Manufacturing	347	354	337	+ 3
Total Unemployed - thous.	211	195	253	-17	Construction	67	66	62	+ 8
Unemployment Rate - % SA	11.1	10.9	13.5		Trade	281	281	273	+ 3
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	289	291	295	- 2
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	218	219	220	- 1
Mfg. Avg. Wkly. Hours	40.8	41.3	40.7	+ 0	Fin., Ins., & Real Est.	62	62	60	+ 3
Mfg. Avg. Wkly. Earn. - \$	328	329	309	+ 6	Trans. Com. & Pub. Util.	72	73	71	+ 1
<b>FLORIDA</b>									
Civilian Labor Force - thous.	5,162	5,067	5,006	+ 3	Nonfarm Employment- thous.	4,078	4,119	3,847	+ 6
Total Employed - thous.	4,811	4,731	4,598	+ 5	Manufacturing	496	498	457	+ 9
Total Unemployed - thous.	351	336	408	-14	Construction	309	307	270	+14
Unemployment Rate - % SA	7.0	6.7	8.5		Trade	1,107	1,105	1,032	+ 7
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	610	644	597	+ 2
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	1,006	1,015	962	+ 5
Mfg. Avg. Wkly. Hours	41.3	41.5	40.6	+ 2	Fin., Ins., & Real Est.	309	309	288	+ 7
Mfg. Avg. Wkly. Earn. - \$	316	317	297	+ 6	Trans. Com. & Pub. Util.	231	230	231	0
<b>GEORGIA</b>									
Civilian Labor Force - thous.	2,818	2,817	2,711	+ 4	Nonfarm Employment- thous.	2,408	2,412	2,273	+ 6
Total Employed - thous.	2,638	2,643	2,502	+ 5	Manufacturing	531	535	508	+ 5
Total Unemployed - thous.	181	174	209	-13	Construction	139	136	117	+19
Unemployment Rate - % SA	6.2	6.1	7.5		Trade	598	590	549	+ 9
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	418	437	421	- 1
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	429	424	399	+ 8
Mfg. Avg. Wkly. Hours	40.8	41.3	40.8		Fin., Ins., & Real Est.	129	127	123	+ 5
Mfg. Avg. Wkly. Earn. - \$	307	312	289	+ 6	Trans. Com. & Pub. Util.	154	153	150	+ 3
<b>LOUISIANA</b>									
Civilian Labor Force - thous.	1,953	1,965	1,934	+ 1	Nonfarm Employment- thous.	1,573	1,581	1,566	+ 0
Total Employed - thous.	1,771	1,780	1,700	+ 4	Manufacturing	182	182	180	+ 1
Total Unemployed - thous.	182	185	234	-22	Construction	114	114	117	- 3
Unemployment Rate - % SA	9.0	8.6	11.8		Trade	377	377	372	+ 1
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	311	317	312	- 0
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	310	312	304	+ 2
Mfg. Avg. Wkly. Hours	41.0	41.8	40.2	+ 2	Fin., Ins., & Real Est.	84	84	84	0
Mfg. Avg. Wkly. Earn. - \$	414	419	400	+ 4	Trans. Com. & Pub. Util.	117	117	119	- 2
<b>MISSISSIPPI</b>									
Civilian Labor Force - thous.	1,079	1,070	1,085	- 1	Nonfarm Employment- thous.	795	800	788	+ 1
Total Employed - thous.	962	957	941	+ 2	Manufacturing	210	211	206	+ 2
Total Unemployed - thous.	117	113	144	-19	Construction	34	33	35	- 3
Unemployment Rate - % SA	10.2	9.6	12.5		Trade	170	170	166	+ 2
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	173	177	174	- 1
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	126	127	126	0
Mfg. Avg. Wkly. Hours	39.9	40.8	39.8		Fin., Ins., & Real Est.	35	35	34	+ 3
Mfg. Avg. Wkly. Earn. - \$	274	283	266	+ 3	Trans. Com. & Pub. Util.	39	39	39	0
<b>TENNESSEE</b>									
Civilian Labor Force - thous.	2,229	2,227	2,211	+ 1	Nonfarm Employment- thous.	1,824	1,825	1,717	+ 6
Total Employed - thous.	2,027	2,033	1,949	+ 4	Manufacturing	496	496	469	+ 6
Total Unemployed - thous.	202	194	262	-23	Construction	85	84	70	+21
Unemployment Rate - % SA	8.8	8.7	11.5		Trade	417	410	394	+ 6
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	294	303	282	+ 4
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	348	349	328	+ 6
Mfg. Avg. Wkly. Hours	40.4	41.7	40.3	+ 0	Fin., Ins., & Real Est.	84	84	82	+ 2
Mfg. Avg. Wkly. Earn. - \$	314	322	301	+ 4	Trans. Com. & Pub. Util.	93	91	84	+11

**Notes:** All labor force data are from Bureau of Labor Statistics reports supplied by state agencies. Only the unemployment rate data are seasonally adjusted. The Southeast data represent the total of the six states. The annual percent change calculation is based on the most recent data over prior year.

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